

AKKUYU NÜKLEER ANONİM ŞİRKETİ

Appendix
APPROVED BY
Order of AKKUYU NÜKLEER
ANONİM ŞİRKETİ
dated _____ No. _____

MANAGEMENT PROCEDURE

Integrated Management System

Regulation on the Use of Imported Products to be Used at Akkuyu NPP

GD.AKU.7.4-02-02-0059-2020
(Revision 1)

Ankara, 2020

Foreword

- 1 DEVELOPED BY: the Audit and Inspection Department of the Quality Directorate
- 2 APPROVED AND BROUGHT INTO EFFECT BY AN ORDER OF AKKUYU NÜKLEER ANONİM ŞİRKETİ: dated _____ 2020 No. _____
- 3 ENFORCED: in lieu of GD.AKU.7.4-02-02-0059-2015
- 4 EFFECTIVE DATE: _____ 2020
- 5 VALIDITY PERIOD: unlimited
- 6 REVIEW DATE: once every three years and in case of changing the procedure and regulatory documents for making a decision on the application of imported products
- 7 ORIGINAL TO BE KEPT BY: Quality Management Department
- 8 DIVISION IN CHARGE OF MAINTENANCE: Audit and Inspection Department

COPIES TO BE SENT TO:

Participants in the design, manufacture and supply of imported products for the Akkuyu NPP

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1 Present Purpose and Scope

1.1 “Regulation on the Use of Imported Products to be Used at Akkuyu NPP” (hereinafter referred to as the Regulation) has been developed in accordance with the requirements of the “Guidelines for the Management System at Nuclear Facilities” and determines the organization, procedure and basic principles of activity when deciding on the application of imported products to be used at NPPs.

1.2 The Regulation applies to imported products of 1, 2 and 3 safety classes according to NP-001, subject to conformity assessment in the form of acceptance and/or tests in accordance with the requirements of clause 5.4 of GD.AKU.7.4-02-02-0054.

1.3 Imported products mean products:

- designed and/or manufactured according to regulatory documents different from the regulatory documents of the Russian Federation;
- designed and/or manufactured according to the regulatory documents of the Russian Federation outside the territory of the Russian Federation.

1.4 The requirements of this Regulation do not apply to products classified as safety class 4 according to NP-001.

1.5 The requirements of this Regulation are mandatory for the subdivisions of AKKUYU NÜKLEER ANONİM ŞİRKETİ (hereinafter referred to as the Company), the Authorized Organization and organizations involved in the design, manufacture, conformity assessment and incoming inspection of products supplied for NPPs.

2 Regulatory References

2.1 References to the following documents are used in this Regulation:

Official gazette of the Republic of Turkey dated 8/4/2017 No. 30032	Guidelines for Management System at Nuclear Facilities.
NP-001-97	General Provisions on Nuclear Power Plants Safety.
NP-031-01	Design Standards for Aseismic Nuclear Power Plants.
NP-068-05	Pipeline Valves for Nuclear Power Plants. General Technical Requirements.
NP-071-06	Rules of Conformity Assessment of Equipment, Component Parts, Materials and Semifinished Products Supplied to Nuclear Facilities.
PNAE G-7-008-89	Rules for Design and Safe Operation of Equipment and Pipelines of Nuclear Power Facilities.
GOST 2.114-2016	Unified System of Design Documentation. Technical Specifications.
GOST 15.016-2016	System of Development and Launching of New Products. Technical Assignment. Requirements to Contents and Execution.

- GD.AKU.8.3-02-02-0051** Regulation on Non-Conformances Control Found at Manufacturing and Incoming Inspection of Products for Akkuyu NPP.
- GD.AKU.7.4-02-02-0052** Regulation on Checking Up Readiness of Manufacturer's Production Before the Beginning of Products Output for Akkuyu NPP.
- GD.AKU.7.4-02-02-0054** Regulation on the Compliance Assessment in the Form of Acceptance and Tests of Products for Akkuyu NPP.
- RG.AKU.8.2.2-07-03-0115** Procedure for Coordination of Technical Assignments and Technical Specifications for Equipment for Akkuyu NPP.

3 Terms and Definitions

3.1 In the Regulation, terms and their definitions are used in accordance with GD.AKU.7.4-02-02-0054, GD.AKU.8.3-02-02-0051, as well as terms with appropriate definitions are used:

Technical Requirements (Technical Specification)	Source document for the development of the item and technical documentation thereto, establishing the item basic purpose and quality indicators, technical and economic and special requirements to the developed item, volume, stages of development and the composition of engineering documentation.
Expert Review	The type of scientific and technical activity aimed at applying new knowledge to solve technological, engineering and other problems, consisting in the study and analysis of data submitted by applicants, including confirming the compliance of equipment, products, materials and component parts with the requirements of regulatory documents in the field of nuclear energy use.
Electronic Components	Electrical, radio and electronic products used as component parts in the manufacture of electrical and electronic devices, equipment, instruments and assemblies, namely: semiconductor devices (microcircuits, transistors, diodes, etc.), resistors, capacitors, connectors and connecting items, switching and protective devices, relays and other low-current electrical items
Cable Products	A flexible product (cable, wire, cord) intended for the transmission of electrical energy, electrical and optical information signals, or used for the manufacture of windings of electrical devices.
Audit	An action, independent and documented by way of research, inspection and evaluation, in order to obtain objective evidence and determine the adequacy, correctness and efficiency of the application of relevant rules, procedures, conditions, instructions, specifications, standards, administrative or production programs and other approved documents

4 Abbreviations

4.1 The following abbreviations are used in the Regulation:

APCS	Automated Process Control System
NPP	Akkuyu Nuclear Power Plant
EIF	External Influencing Factor
GOST	State Standard
LMSO	Leading Materials Science Organization
DGS	Diesel-Generator Set
USDD	Unified System of Design Documentation
SPTA	Spare Parts, Tools and Accessories
I&C	Instrumentation and Control
RD	Regulatory Documents
OST	Industry Standard
TPP	Test Programme and Procedure
DED	Detailed Engineering Documentation
RP	Reactor Plant
RF	Russian Federation
DoA	Decision on Application
MI	Measuring Instruments
ALS	Accident Localization System
QMS	Quality Management System
TA	Technical Assignment
RT	Republic of Turkey
TR/TS	Technical Requirements/Technical Specification
SP	Specifications
AO	Authorized Organization
IP	Internet Protocol
KKS	Classification and Coding System (Kraftwerk Kennzeichen System)
TDS	Technical Data Sheet

5 General Provisions

5.1 If it is necessary for the use and supply of imported products, the Supplier¹ shall:

- Ensure the development, coordination and approval of TR/TS for imported products, in the manner prescribed by this Regulation;
- Ensure the provision of a set of documents for an expert review of the Authorized Organization, in accordance with the requirements of this Regulation;
- Ensure the elimination of comments/non-conformances issued by the Authorized Organization based on the results of an expert review of a set of documents, in accordance with the requirements of this Regulation;
 - Organize and ensure the audit of the manufacturer of imported products (hereinafter referred to as the Audit) for the possibility of manufacturing products for NPPs with the participation of representatives of the Company. The need to conduct an Audit is determined by the Company at the written request of the Supplier (the Audit is conducted in accordance with the supplier's procedure);
- Provide conditions for carrying out conformity assessment in accordance with the requirements of GD.AKU.7.4-02-02-0054;
- Develop, agree and approve the Decision on the use of imported products (hereinafter referred to as the Decision on Application), in accordance with the requirements of this Regulation.

5.2 TR/TS is developed taking into account the requirements of GOST 15.016 and shall contain at least the following sections:

- the list of Russian norms, rules and other applicable regulatory documents, which requirements shall apply to the products;
- indices of applicability;
- completeness of the products delivery, including spare parts and tools;
- reliability indices;
- ensuring control during manufacturing and operation;
- repairability;
- metrological support during manufacturing;
- basic and welding materials, their certification;
- transportation and storage;
- requirements for a set of documentation for products (data sheet, certificate of quality, TPP, technical description, and instructions for installation, commissioning and operation, etc.);
- requirements for seismic resistance, strength analysis, electromagnetic compatibility, corrosion resistance, fire safety, explosion safety, etc.;
- ensuring functional capability in accident conditions.

5.3 The document which establishes technical requirements to the materials (basic and welding ones) is developed taking into account the requirements of GOST 2.114 and shall contain at least the following sections:

¹ In this case, the Supplier is a supplier of imported products or an equipment manufacturer using imported products.

- the list of Russian norms, rules and other applicable regulatory documents, which requirements shall apply to the materials proposed for procurement;
- physical and mechanical, process and corrosion properties of the base material and/or joint metal or weld metal;
- requirements for materials characteristics established by the applicable norms of the products strength analysis, where these materials are used;
- providing conditions of weldability with Russian materials;
- ensuring deactivation (if necessary).

Note: technical requirements may be updated and supplemented taking into account the conditions of materials application.

5.4 Instead of TR/TS, it is allowed to use the previously developed TA/SP (the TA/SP data, as well as changes to them, shall be agreed in the manner established by RG.AKU.8.2.2-07-03-0115).

5.5 When the imported products are manufactured under the Russian RD (GOST, OST, SP), rules and norms in force in the field of the atomic energy use in the Russian Federation, it is allowed not to develop TR/TS for imported products.

5.6 The Company shall coordinate and approve the TR/TS for imported products before the commencement of conformity assessment in the form of acceptance and testing.

5.7 The expert review of the set of documents by the Authorized Organization shall be carried out before the start of product manufacturing.

5.8 The Audit shall be carried out before the start of product manufacturing.

5.9 The Audit Program is developed by the Supplier within 10 (ten) business days from the moment the Company confirms the need for an Audit.

5.10 The Audit can be replaced, in agreement with the Company, with a check of the readiness of the manufacturer's production before starting the manufacture of products which shall be carried out in accordance with the requirements of GD.AKU.7.4-02-02-0052.

5.11 The Company has the right to involve the Authorized Organization, the Leading Materials Science Organization and other specialized organizations to participate in the Audit.

5.12 The specifics of conducting Audits of Sub-suppliers of manufacturers of imported products are specified in Section 12 of this Regulation.

5.13 The essential requirements for the application of imported products are as follows:

- compliance with the legislative documents of the RT and the Russian Federation, norms and rules in the field of the atomic energy use.
- compliance with the norms, rules and other regulatory documents, included in the NPP Project Licensing Base;
- positive experience in application of imported products (or similar samples) on the nuclear facilities of the Russian Federation and other countries;
- exclusion of deterioration of the characteristics (parameters) of equipment and systems provided for by the nuclear facility project, which imply the application of imported products, as well as the negative impact on the performance of functions of other systems of nuclear facility;

- conformity assessment in the form of acceptance and testing by representatives of the Authorized Organization, the Supplier and the Company;

- Audit of the manufacturer and its sub-suppliers.

5.14 The application of imported products supplied directly to NPPs (equipment during manufacture and/or in the composition of which imported products are used) for their intended purpose without a Decision on Application approved by the Company is prohibited.

5.15 For imported equipment supplied directly to NPPs, only the Decision on Application for this equipment is issued, i.e. DoA for component parts and materials used in the manufacturing of the above equipment is not issued.

5.16 Starting from the second and during subsequent deliveries of imported products (equipment in which it is used), the Company may decide to repeatedly use imported products for a period of not more than 5 (five) years, for:

- imported products supplied directly to NPPs (at the written request of the Supplier);

- imported products as part of specific equipment manufactured by the manufacturer of the Russian Federation and according to the regulatory documents of the Russian Federation, without making a decision on application for each delivery (at the written request of the Supplier).

5.17 Adoption of the above decision on repeated application of imported products is allowed provided the following conditions are met:

- technical documentation (TR/TS/TA/SP, TPP, etc.) and the corresponding notifications of changes have passed the expert review, and any comments/non-conformances are absent or eliminated in full;

- TR/TS/TA/SP and TPP, and corresponding notifications of changes for imported products are agreed/approved in full and in accordance with the established procedure;

- the imported products initially supplied have passed the compliance assessment in the form of acceptance and testing, no non-conformances of such products (equipment in which they are used) have been identified during manufacturing;

- the imported products initially supplied have passed the incoming inspection, from the first presentation, no non-conformances of such products (equipment in which they are used) were identified.

5.18 Imported products, based on decisions on repeated application, can be used directly at NPPs or as part of specific equipment manufactured by the manufacturer of the Russian Federation and according to the regulatory documents of the Russian Federation, subject to the control by the Company and/or compliance by the Authorized Organization of the following conditions:

- availability of positive results of compliance assessment of imported products in the form of acceptance and testing in the scope of the list of standardized check-points of the quality plan attached to the decision on application;

- availability of positive results of periodic tests of imported products carried out at least once every three years according to the periodic test programme and procedure agreed with the Company;

- approval of changes made to TR/TS/TA/SP, TPP by the Company if such changes were made;

– approval of changes in the scope of standardized check-points of the quality plan for imported products by the Company if such changes were made.

5.19 The decision on repeated application of imported products for a period not exceeding 5 (five) years shall include an appendix on the conditions for the validity of this decision, set out in clauses 5.17 and 5.18.

5.20 In case of detection of non-conformities of imported products and/or violations of obligatory conditions of its use on the initiative of the Company, the decision on use may be suspended for a period necessary for elimination of non-conformities and/or violations, or cancelled, should such non-conformities and/or violations fail to be eliminated within the specified period of time.

5.21 It is allowed to apply the current versions of federal norms and rules in the field of atomic energy use, GOST in the design and manufacture of products for NPPs, in the manner established by GD.AKU.8.3-02-02-0051 (through the registration of A class non-conformities).

6 Responsibility

6.1 The Company shall be responsible for:

– Inclusion of the requirements of this Regulation in the agreements (contracts) with the Suppliers (when concluding the agreement (contract) for manufacture/delivery without the General Contractor's participation)/General Contractors;

– review, coordination and approval of TR/TS;

– coordination of audit programs for the manufacturer of imported products (its sub-suppliers);

– participation in audits of manufacturers (their sub-suppliers);

– participation in compliance assessment, in accordance with the requirements of GD.AKU.7.4-02-02-0054;

– assessment of the effectiveness and feasibility of decision-making;

– review, coordination and approval of the Decisions on Application of imported products;

– compliance with the requirements of this Regulation.

6.2 The General Contractor shall be responsible for:

– compliance with the requirements of this Regulation;

– inclusion of the requirements of this Regulation in the agreements (contracts) with the suppliers;

– review and coordination of TR/TS;

– organization and assurance of the audit of the manufacturer of imported products (its sub-suppliers) for the possibility of manufacturing products for NPPs with the participation of representatives of the Company;

– assurance of the development of programs for conducting audits of manufacturers (their sub-suppliers) and their coordination with the Company;

– provision of conditions for conducting compliance assessment, in accordance with the requirements of GD.AKU.7.4-02-02-0054.

6.3 General Designer of NPP/enterprise-developer of DED/enterprise-holder of OST/SP for products/Reactor Plant Chief Designer is responsible for:

- compliance with the requirements of this Regulation;
- review and coordination of TR/TS;
- review and coordination of the Decisions on Application of imported products.

6.4 The Supplier shall be responsible for:

- ensuring the inclusion of requirements for products from the General Contractor or the Company, set forth in the agreements (contracts) for delivery entered into with it, into the agreements (contracts) with the manufacturers of products and their sub-suppliers;
- compliance with the requirements of this Regulation;
- organization of development and ensuring interaction during the coordination and approval of TR/TS;
- organization and assurance of the audit of the manufacturer (its sub-suppliers) for the possibility of manufacturing products for NPPs with the participation of representatives of the Company;
- development of programs for conducting audits of manufacturers (their sub-suppliers) and their coordination with the Company;
- provision of conditions for conducting compliance assessment, in accordance with the requirements of GD.AKU.7.4-02-02-0054;
- organization of development and ensuring interaction in the coordination and approval of Decisions on Application of imported products;
- ensuring timely provision of documentation for the expert review;
- rapid provision of additional materials and information related to imported products.

6.5 The manufacturer of imported products and its sub-suppliers shall be responsible for:

- compliance with the requirements of this Regulation;
- development, coordination and approval of TR/TS;
- organization and assurance of the audit of the manufacturer and its sub-suppliers for the possibility of manufacturing products for NPPs with the participation of representatives of the Company;
- provision of conditions for conducting compliance assessment, in accordance with the requirements of GD.AKU.7.4-02-02-0054;
- review and coordination of the Decisions on Application of imported products;
- provision of documentation for expert review;
- rapid provision of additional materials and information related to imported products.

6.6 The Authorized Organization shall be responsible for:

- compliance with the requirements of this Regulation;
- expert review of the documentation;
- execution of an appropriate conclusion based on the results of the expert review of documentation;

– conformity assessment in the form of acceptance and testing, in accordance with the requirements of GD.AKU.7.4-02-02-0054.

7 Procedure for Coordination and Approval of TR/TS

7.1 TR/TS for imported equipment for review, coordination and approval in the Company shall be agreed with the following organizations:

- Reactor Plant Chief Designer (for products forming part of the reactor plant);
- General Designer of the NPP;
- Supplier;
- General Contractor.

7.2 TR/TS for imported component parts, spare parts, semifinished products, welding (surfacing) materials for review, coordination and approval in the Company shall be agreed with the following organizations:

– Manufacturer (developer of design documentation for equipment, where imported component parts, SPTA, semifinished products, welding (surfacing) materials are applied), when final products are manufactured/completed in the Russian Federation;

– Leading Materials Science Organization (for imported semifinished products and welding (surfacing) materials applied in the manufacturing/completing of equipment, which is covered by federal norms and rules of PNAE G-7-008 and/or NP-068);

– Reactor Plant Chief Designer (for imported products forming part of the reactor plant);

- General Designer of the NPP;
- Supplier;
- General Contractor.

7.3 TR/TS shall be sent to the address of the organizations specified in clauses 7.1 or 7.2, simultaneously with the official transmittal letter. The term for consideration of TR/TS for each of the organizations shall be no more than 15 (fifteen) business days from the date of its official receipt.

7.4 If there are any remarks, they shall be made in writing and sent by an official letter to the TR/TS developer.

7.5 The TR/TS developer shall, within the period not exceeding 10 (ten) business days from receipt of the list of remarks, eliminate them and send the TR/TS for renegotiation.

7.6 The TR/TS for each organizations shall be reconsidered within the period not exceeding 10 (ten) business days from the date of receipt of the transmittal letter sent officially.

7.7 After coordination with all the organizations specified in clauses 7.1 or 7.2, TR/TS, together with the necessary set of documents, shall be sent for expert review to the Authorized Organization. The term for the expert review, as well as the procedure for interaction when eliminating the comments/non-conformances, identified during the expert review, are specified in section 10 of this Regulation.

7.8 For review, coordination and approval of TR/TS, adjusted according to the results of the expert review, are sent to the Director for Equipment and Logistics of the Company. The Director for Equipment and Logistics of the Company organizes the review, coordination and approval of TR/TS in the Company.

7.9 The term for review, coordination and approval of TR/TS in the Company shall be no more than 15 (fifteen) business days from the date of their receipt by an official letter.

7.10 The Company reserves the right to extend the period of the TR/TS consideration, but not more than 10 (ten) business days.

7.11 Correction of the comments identified by the Company during the consideration of the TR/TS is carried out in accordance with clauses 7.4, 7.5 and 7.6 of this Regulation.

7.12 After the TR/TS has been coordinated with the organizations specified in clauses 7.1 or 7.2 and the comments/non-conformances identified during the expert review and/or the Company's review have been eliminated, it is approved by the Company.

8 Requirements for Execution and Content of the Decision on Application of Imported Products

8.1 The Decision on application shall be drawn up for a certain agreement (contract) for delivery of the particular imported products after their compliance assessment, for the particular NPP power unit(s). It is allowed to issue a Decision on Application for several NPP power units and for a specific name of products manufactured according to the same TR/TS (TA/SP).

8.2 Decisions on Application and appendices to them are drawn up in Russian and English or in a bilingual Russian-English version.

8.3 The mandatory forms of the Decision on Application, as well as the requirements for their execution and content, are given in:

- Appendix 1, for imported equipment;
- Appendix 2, for imported component parts used in the manufacturing of equipment in the Russian Federation;
- Appendix 3, for imported SPTA supplied to NPPs;
- Appendix 4, for imported semifinished products, welding (surfacing) materials used in the manufacturing of equipment in the Russian Federation;
- Appendix 5, for imported semifinished products, welding (surfacing) materials supplied to NPPs.

8.4 Appendices to the executed Decision on Application specified in the forms, in accordance with Appendices 1-5 to this Regulation, are mandatory.

8.5 If the Decision on application is prepared for several units/types of imported products, the Decision on application shall be accompanied by the List of imported products in accordance with the form provided for in Appendix 6. This List of Imported Products shall be an appendix to Decision on Application.

8.6 If there are additional conditions of application, such as satisfactory test results during the input control, within the equipment, etc., they shall be specified in the Crucial Part of the Decision on Application in full.

8.7 The Decision on Repeated Application is made for the products specified in clause 5.16 of this Regulation

8.8 The Decision on Repeated Application is made out according to the forms, in accordance with Appendices 1-5, with the following requirements:

- After “**DECISION No.** _____ **dated** _____” there shall be written “on Repeated Application ...”.

- After “**DECIDED:**” there shall be written “To apply”.
- Before “Appendices:” there shall be written “When the conditions of this Decision are met, Appendix 1. The Decision is valid until _____.”
- Appendix 1 for Decisions on Repeated Application are the Conditions of Validity of Decision on Repeated Application, which shall contain the requirements specified in clauses 5.17 and 5.18.
- Appendix 2 for Decisions on Repeated Application are all previous decisions on application of this product for NPPs.
- The rest of the appendices are given in accordance with Appendices 1-5 to this Regulation.

9 Procedure for Coordination, Approval and Registration of the Decision on Application of Imported Products

9.1 The Decision on Application in order to be reviewed, coordinated and approved by the Company shall be agreed upon with the following organizations:

- Leading Materials Science Organization (for: imported equipment subject to federal norms and rules of PNAE G-7-008 and/or NP-068; imported component parts, SPTA, semifinished products, welding (surfacing) materials used in the manufacturing/assembly of equipment, which is subject to federal norms and rules of PNAE G-7-008 and/or NP-068);
- Developer of engineering documentation for equipment, where imported component parts, SPTA, semifinished products, welding (surfacing) materials are applied (when the equipment is manufactured in the Russian Federation);
- Reactor Plant Chief Designer (for imported equipment, component parts, SPTA, semifinished products, welding (surfacing) materials, being parts of the reactor plant);
- General Designer of the NPP.

9.2 The Decision on Application with all appendices is sent for coordination to the organizations specified in clause 9.1, simultaneously with an official transmittal letter (appendices can be sent by official e-mail).

9.3 The term for consideration of the Decision on Application for each of the organizations shall be no more than 15 (fifteen) business days from the date of their receipt by an official letter.

9.4 If there are any remarks, they shall be made in writing and sent by an official letter to the developer² of the Decision on Application.

9.5 The developer of the Decision on Application shall, within the period not exceeding 10 (ten) business days from receipt of the list of remarks, eliminate them and send the Decision on Application for renegotiation.

9.6 The Decision on Application for each organizations shall be reconsidered within the period not exceeding 10 (ten) business days from the date of receipt of the transmittal letter sent officially.

9.7 After coordination of the Decision on Application with the organizations specified in clause 9.1, it (with all appendices) is sent by an official transmittal letter to the Company's

² In this case, the developer is a supplier of imported products or an equipment manufacturer using imported products.

Quality Director. The Quality Director organizes the review, coordination and approval of the Decision on Application in the Company.

All letters on sending for review and coordination of Decisions on Application with appendices are duplicated to the email address quality@akkuyu.com and are accepted for work by the Department of Audits and Inspections the next day after their receipt to the specified email address.

9.8 It is allowed, instead of the approving signatures, to make a reference to the number and date of the approval letter, while opposite the organization an entry “Agreed by letter dated _____ No. _____” is made.

9.9 The period for consideration of the Decision on Application in the Company shall be no more than 15 (fifteen) business days from the date of their receipt by an official letter, subject to the provision of a complete set of supporting documents.

9.10 The Company reserves the right to extend the period of consideration of the Decision on Application, but not more than 10 (ten) business days.

9.11 Decisions on Application are coordinated by the Company: Quality Director (in terms of conformity of the form, scope of coordination and availability of mandatory appendices), Director for Equipment and Logistics (in terms of meeting the requirements of the terms of the contract for supply of equipment), Deputy Technical Director of the NPP under construction in the direction (in terms of compliance with operational and technical characteristics), Head of the Department of Economic Security (in terms of assessing the effectiveness and feasibility of making a decision), and approved by the Deputy Director of the NPP under construction – Chief Technology Officer of AKKUYU NUKLEER A.S.

9.12 Correction of the comments identified by the Company during the consideration of the Decisions on Application is carried out in accordance with clauses 9.4, 9.5 and 9.6 of this Regulation.

9.13 In case of repeated refusal to coordinate the Decision on Application by the Company or the organizations specified in clause 9.1, the developer shall organize a conciliation meeting within 5 (five) business days. The organizations, which failed to approve the Decision on application, shall ensure that their representative attends the consensus meeting (in person or by means of telephone/video conference).

9.14 In order to prevent falsification of the documents, the organizations indicated in clause 9.1 shall be obliged to:

- inform the Company when there are any remarks to the Decision on application and justifying documents (copy of the letter with remarks shall be sent to the Quality Director of the Company);
- the letter on coordination of the Decision on Application shall indicate the number of letters, according to which the Decision on Application was adjusted (if available).

9.15 After registration, coordination and approval of the Decision on Application by the Company, a copy of the Decision with all attachments is sent to the developer by an official transmittal letter. A registered copy of the Decision on Application shall be included in the accompanying documentation for the product.

9.16 Decisions on Repeated Application are agreed with the Company by the Quality Director (in terms of conformity of the form, scope of coordination and availability of mandatory appendices), Director for Equipment and Logistics (in terms of meeting the requirements of the terms of the contract for supply of equipment), Deputy Technical Director of the NPP under construction in the direction (in terms of compliance with operational and technical characteristics), Head of the Department of Economic Security (in terms of assessing the

effectiveness and feasibility of making a decision), and approved by the Deputy Director of the NPP under construction – Chief Technology Officer of AKKUYU NUKLEER A.S

9.17 Decisions on Repeated Application are registered with the Company after approval. A copy of the registered Decision on Repeated Application is sent to the developer and organizations specified in clause 9.1. A copy of the Decision on Repeated Application shall be included in the accompanying documentation for the product.

9.18 The structure of the registration number is as follows:

Decision Code	Mark	Project Code	Mark	Registration Place Code	Mark	Registration Number	Mark	Year of Development
I		II		III		IV		V
D	.	AKU	.	XX.XX	.	XXX	.	XXXX

- sector I – designation of the document type: decision – D;
- sector II – designation of project code: AKU;
- sector III – designation of place of registration, quality director: 06.01
- sector VI – registration number according to the electronic registration log, in XXX format, numbering within the current year. Starts with 1 next year;
- sector V – designation of the year of engineering solution registration, in XXXX format.

9.19 The electronic register of DoA is kept in the Department of Audits and Inspections, by the responsible employee appointed by the head of the department.

10 Procedure for Examination of Documentation for Imported Products

10.1 Expert review of documentation for imported products is carried out by an Authorized Organization.

10.2 To conduct an expert review of the documentation for imported products, it shall be sent to the Authorized Organization at least 40 (forty) business days before the start of manufacturing with the conclusion, if necessary, of an appropriate confidentiality agreement with it.

10.3 The list of documentation to be sent to the Authorized Organization for expert review is specified in Appendix G to this Regulation.

10.4 Based on the results of the expert review of the set of documents, the Authorized Organization prepares a draft Conclusion and sends it to the Supplier and the Quality Director of the Company. The period for the expert review by the Authorized Organization and for the execution of the draft Conclusion shall not exceed 20 (twenty) business days from the date of receipt of the complete set of documentation.

10.5 In the event of any comments/non-conformances in the draft Conclusion, the Supplier is obliged to ensure that the comments/non-conformances are corrected and to send the corrected documentation for re-consideration to the Authorized Organization within 10 (ten) business days from the date of receipt of the draft Conclusion.

10.6 The Authorized Organization shall re-examine the corrected documentation within 10 (ten) business days from the date of its receipt. Upon the expiration of the specified period, the Authorized Organization draws up an appropriate Conclusion and sends it to the Supplier and the Quality Director of the Company.

10.7 If, upon repeated review of the documentation, it is revealed that the comments/non-conformances of the Authorized Organization have not been corrected, the Company shall organize a conciliation meeting within 5 (five) business days. The Supplier and the Authorized Organization shall ensure that their representative is present at the reconciliation meeting (in person or via telephone/video).

10.8 The manufacture of imported products without expert review of the relevant documentation or in the presence of negative results of expert review reflected in the Conclusions is prohibited.

10.9 As coordinated with the Authorized Organization and the Company, it is allowed to conduct a phased expert review of the documentation, provided that the Supplier provides documentation necessary for the performance of the relevant technological and control operations, positive results of the expert review, and appropriate control by the Authorized Organization. The Supplier shall coordinate with the Authorized Organization a schedule for the phased expert review of the documentation, which shall contain, at a minimum, information on the timing and scope of submission of documentation for the expert review. The schedule coordinated by the Authorized Organization shall be sent to the Quality Director of the Company.

11 Features of Delivery and Application of Some Imported Products

11.1 Technical requirements for cable products listed in clause 5.4.1.5 and clause 5.4.1.6 of GD.AKU.7.4-02-02-0054-202, shall be agreed with the head enterprise for cable products for nuclear facilities of the Russian Federation (All-Russian Scientific, Design, Development and Research Institute of Technology for Cable Industry).

11.2 Electrical and radio products, computer equipment, software, cable products shall be supplied in an industrial version with technical documentation and data sheets with a mark of acceptance by the quality service. Software (software product) for control systems shall be supplied as a product for industrial and technical purposes with the availability of software documentation, ensuring guarantees of quality and reliability indicators by the Supplier and compliance with the requirements of the regulatory documents of the Russian Federation included in the NPP Project Licensing Base.

12 Features of Conducting Audits of Sub-Suppliers of a Manufacturer of Imported Products

12.1 If sub-suppliers are involved in the manufacture of imported products by the manufacturer, the Supplier is obliged to inform the Company about this and, if necessary, organize an Audit of these sub-suppliers with the involvement of representatives of the Company. Need to conduct an Audit of sub-suppliers is determined by the Company at the written request of the Supplier.

12.2 Prior to the approval of the TR/TS (TA/SP) for imported products manufactured by the manufacturer, the Supplier shall send information about where and what component parts, spare parts, materials and semifinished products will be manufactured for it.

12.3 Based on the information provided, the Company compiles a list of sub-suppliers which are subject to Audit and sends it to the Supplier.

12.4 The Supplier develops the Audit program(s) and sends it (them) to the Company, within 10 (ten) business days from the date the Company sends the list of sub-suppliers which are subject to Audit.

12.5 The terms of the Audit of sub-suppliers are determined by the Supplier and coordinated with the Company.

12.6 Audit of sub-suppliers shall be carried out prior to manufacturing of products by the manufacturer. In some cases, as agreed with the Company, it is allowed to conduct an Audit of sub-suppliers during the period of manufacture of imported products by the manufacturer.

12.7 It is the Supplier's responsibility to arrange and facilitate the Audit of sub-suppliers.

12.8 Audits of sub-suppliers of a manufacturer of imported products are carried out in cases where the sub-supplier is a manufacturer:

– component parts used in the composition of products classified as 1, 2, 3 safety class according to NP-001;

– basic materials (semifinished products): forgings, castings, stampings and fasteners of “main joints” (connection of parts and/or assembly units operating under pressure) used in manufacturing (repair) of products of safety classes 1, 2, 3 according to NP-001 and covered by federal rules and norms of PNAE G-7-008;

– basic materials (semifinished products): forgings, castings, stampings used at manufacturing of articles (shafts and pump blades, drivers, pipeline fittings, supporting plates of reactors, etc.) built-in (located) inside casings of equipment of safety classes 1, 2, 3 according to NP-001.

Developed by:

Expert of the Department of Audits and Inspections

A.N. Martynov

Head of the Department of Incoming Inspection _____ A.I. Zatsepin

Quality Inspection:

Head of the Department of Audits and Inspections

_____ M.D. Dolotkazin

Agreed with:

Quality Director

_____ M.V. Rabotayev

Director for Equipment and Logistics

_____ Ye.Yu. Semenov

Deputy Director for Development of NPP under Construction

_____ D.V. Romanets

Deputy Director of NPP under Construction – Chief Technology Officer

_____ O.A. Ivanov

Appendix 1
(mandatory)
Form of Decision on Application of Imported Equipment

APPROVED BY

Deputy Director of NPP under Construction –
Chief Technology Officer
AKKUYU NÜKLEER ANONİM ŞİRKETİ

(signature) (Initials, Surname)

_____, 20 ____

DECISION No. _____ **dated** _____

(registration number of the decision)

(registration date)

on application of imported _____ manufactured by _____

(name and designation of equipment)

for power unit No. ____ of Akkuyu NPP.

(name of manufacturer)

(number of power unit)

_____, in accordance with the agreement (contract)

(full name of the manufacturer (country))

(number and date of the agreement (contract) for delivery of equipment (contract chain shall be disclosed in full))

is (are) manufactured _____ for power unit No. ____ of Akkuyu NPP:

(full name and designation of equipment)

(number of power unit)

Classification designation as per NP-001/NP-068: _____.

Group of equipment as per PNAE G-07-008 ^{1*}

Seismic category as per NP-031: _____.

KKS code: _____^{1*}

TR/TS/TA/SP: _____.

(full name and designation of TR/TS/TA/SP for equipment and information on their coordination and approval)

Quality Management System _____

(name of the manufacturer (country))

is certified for compliance with the requirements of _____,

(name of the standard for compliance with which the QMS is certified)

the certification authority _____

(name of the certification authority)

has issued the certificate _____.

(date of issue and certificate number, validity period, scope of certification)

_____ factory No. (Nos.) _____

(name and designation of equipment)

(factory number(s) or reference to appendix 1)

has (have) passed acceptance/qualification/periodic and delivery and acceptance tests, in accordance with _____, the results are satisfactory.

(full name and designation of TPP for equipment and information on their coordination and approval)

The Authorized Organization _____, according to NP-071, has assessed

(name of the AO)

the compliance in the form of acceptance as per the Quality Plan(s) No. _____,

(number(s) of the Quality Plan(s) or reference to appendix 1)

developed in accordance with the requirements of GD.AKU.7.4-02-02-0054.

IT WAS RESOLVED:

Apply imported _____

(name and designation of equipment)

factory No. (Nos.) _____ manufactured _____

(factory number(s) or reference to appendix 1)

(name of the manufacturer (country))

as per _____ for power unit No. ____ of Akkuyu NPP.

(designation of TR/TS/TA/SP)

(number of power unit)

Appendices:

1. List of imported equipment.^{2*}

2. Copy of the inspection report on manufacturer’s production readiness before starting the manufacturing of products/auditing of the manufacturer for the possibility of manufacturing the products for Akkuyu NPP.
3. Copy of TR/TS/TA/SP for imported equipment.
4. Copy of the detailed engineering documentation (assembly drawings), including drawings of body parts and fasteners, units and sealing and fastening parts.
5. Copy of the program of acceptance (for prototype models) and delivery and acceptance tests.
6. Copy of calculations for selection of the basic size.
7. Copy of checking strength calculation.
8. Copy of thermal, hydraulic and other calculations (if necessary).
9. List of Russian rules, norms and other regulatory documents for this equipment, which requirements shall apply to the imported equipment expected to be applied.
10. Copy of the LMSO expert opinion, including a justification of the possible application of imported semifinished products and welding (surfacing) materials in the manufacturing of equipment for Akkuyu NPP and justification of possible application of foreign control methods in the manufacturing of imported equipment for Akkuyu NPP.^{3*}
11. A copy of the results of the documentation expert review carried out by the Authorized Organization and a document confirming the correction of comments/non-conformances identified during the expert review.
12. Copies of statements and protocols of acceptance/qualification/periodic and delivery and acceptance tests of imported equipment.
13. Copy of the quality plan(s) for imported equipment, which passed conformity assessment in the form of acceptance.
14. Copy of the document(s) of quality (service list, data sheet, label) for imported equipment and, if available, executed documents of non-conformances and decisions taken registration.
15. Copies of the agreements (contacts) for delivery (without the financial part).
16. Copies of letters of coordination and approval of the Decision on Application.

DEVELOPED BY:

Organization developed the Decision

 (name of the supplier of imported products and the position of the employee who developed this Decision)

 (signature) (Surname, initials)

_____, 20__

AGREED WITH:

Chief Executive Officer

 (name of the supplier of imported products of the Decision developer)

 (signature) (Surname, initials)

_____, 20__

Leading Materials Science Organization^{3*}

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

NPP General Designer

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

Reactor Plant Chief Designer^{5*}

(name of the organization and position of the employee entitled to approve this Decision)

(signature) (Surname, initials)

_____, 20__

Deputy Chief Technology Officer for the Relevant
Direction of AKKUYU NÜKLEER ANONİM
ŞİRKETİ

(name of the position of Deputy Chief Technology Officer for the Relevant Direction of AKKUYU NÜKLEER A.Ş.)

(signature) (Surname, initials)

_____, 20__

Director for Equipment and Logistic of AKKUYU
NÜKLEER ANONİM ŞİRKETİ

(signature) (Surname, initials)

_____, 20__

Quality Director of AKKUYU NÜKLEER ANONİM
ŞİRKETİ.

(signature) (Surname, initials)

_____, 20__

Head of Economic Security Department of AKKUYU
NÜKLEER ANONİM ŞİRKETİ.

(signature) (Surname, initials)

_____, 20__

Notes:

1* Indicate if information is available.

2* When preparing the Decision on application for several units/types of equipment, list of imported equipment shall be made in accordance with Appendix F.

3* Only for imported equipment subject to federal rules and norms of PNAE G-7-008 and/or NP-068.

4* Coordination by the Reactor Plant Chief Designer is mandatory for imported equipment, forming part of the reactor plant.

Appendix 2
(mandatory)

**Form of the Decision on Application of Imported Component Parts Used in the
Manufacture of Equipment on the Territory of the Russian Federation**

APPROVED BY

Deputy Director of NPP under Construction –
Chief Technology Officer
of AKKUYU NÜKLEER ANONİM
ŞİRKETİ.

(signature) (Initials, Surname)

_____, 20 ____

DECISION No. _____ **dated**

(registration number of the decision)

(registration date)

on application of imported _____ manufactured by

(name and designation of component parts)

_____, for completion of

(name of manufacturer)

(name and designation of equipment in which component parts are used during manufacturing)

of power unit No. ____ of Akkuyu NPP.

(number of power unit)

_____, in accordance with the agreement (contract)

(full name of the manufacturer (country))

(number and date of the agreement (contract) for delivery of component parts (contract chain shall be disclosed in full))

is (are) manufactured _____:

(full name and designation of component parts or reference to appendix 1)

Classification designation as per NP-001: _____.

Group of equipment as per PNAE G-07-008 ^{1*} _____.

Seismic category as per NP-031: _____.^{1*}

KKS code: _____.^{1*}

TR/TS/TA/SP: _____.

(full name and designation of TR/TS/TA/SP for component parts and information on their coordination and approval)

are applied _____, in accordance with the agreement (contract)

(full name of Russian manufacturer)

(number and date of the agreement (contract) for delivery of equipment (contract chain shall be disclosed in full))

for completion of _____

(full name and designation of equipment in which component parts are used during manufacturing)

of power unit No. ____ of Akkuyu NPP:

(number of power unit)

Classification designation as per NP-001/NP-068: _____.

Group of equipment as per PNAE G-07-008 ^{1*} _____.

Seismic category as per NP-031: _____.

KKS code: _____.^{1*}

TA/SP: _____.

(full name and designation of TA/SP for equipment, in which component parts are used during manufacture and information on their coordination and approval)

Quality Management System _____

(name of the manufacturer (country))

is certified for compliance with the requirements of _____,

(name of the standard for compliance with which the QMS is certified)

the certification authority _____

(name of the certification authority)

has issued the certificate _____.
(date of issue and certificate number, validity period, scope of certification)

_____ factory No. (Nos.) _____
(name and designation of component parts) (factory number(s) or reference to appendix 1)
 has (have) passed acceptance/qualification/periodic and delivery and acceptance tests, in accordance with _____, the results are satisfactory.^{2*}
(full name and designation of TPP for component parts and information on their coordination and approval)

The Authorized Organization _____, according to NP-071, has assessed
(name of the AO)
 the compliance in the form of acceptance as per the Quality Plan(s) No. _____
(number(s) of the Quality Plan(s) or reference to appendix 1)
 for the manufacturing of component parts, developed in accordance with the requirements of GD.AKU.7.4-02-02-0054.^{3*}

_____ factory No. (Nos.) _____
(name and designation of component parts) (factory number(s) or reference to appendix 1)
 has (have) passed the conformity assessment in the form of tests during the incoming inspection at _____,
(name of Russian manufacturer)

as per the test programme and procedure _____
(full name and designation of TPP for component parts during incoming inspection and information on their coordination and approval)

and during acceptance/qualification/periodic and delivery and acceptance tests as part of

(name and designation of equipment, designation of TA/SP for equipment, where component parts are used during manufacturing)

as per the test programme and procedure _____,
(full name and designation of TPP for acceptance, qualification, periodic and delivery and acceptance tests of equipment in which component parts and information on their coordination and approval are used during manufacturing)

as per Quality Plan(s) No. _____, developed in accordance with
(number(s) of the Quality Plan(s) for the manufacturing of equipment)

the requirements of GD.AKU.7.4-02-02-0054, positive Inspection Conclusions No. _____ were drawn up.
(numbers of the Inspection Conclusions for incoming inspection of component parts and testing as part of the equipment)

IT WAS RESOLVED:

Apply imported _____
(name and designation of component parts)

factory No. (Nos.) _____ manufactured _____
(factory number(s) or reference to appendix 1) (name of the manufacturer (country))

as per _____
(name and designation of TR/TS/TA/SP for component parts)

for completion of _____
(name and designation of equipment in which component parts are used, designation of TA/SP)

power unit No. ___ of Akkuyu NPP
(number of power unit)

Appendices:

1. List of imported component parts.^{4*}
2. Copy of the inspection report on manufacturer's production readiness before starting the manufacturing of products/auditing of the manufacturer (its subcontractors) for the possibility of manufacturing the products for Akkuyu NPP.
3. Copy of TR/TS/TA/SP for imported component parts.
4. Copy of the detailed engineering documentation (assembly drawings), including drawings of body parts and fasteners, units and sealing and fastening parts.
5. Copy of the program of acceptance (for prototype models) and delivery and acceptance tests of imported component parts.^{2*}
6. Copy of calculations for selection of the basic size.
7. Copy of checking strength calculation.
8. Copy of thermal, hydraulic and other calculations (if necessary).
9. List of Russian rules, norms and other regulatory documents for this equipment, which requirements shall apply to the imported equipment expected to be applied.

10. Copy of the LMSO expert opinion, including a justification of the possible application of imported semifinished products and welding (surfacing) materials in the manufacturing of imported component parts for equipment produced in the Russian Federation and justification of possible application of foreign control methods in the manufacturing of imported component parts for equipment produced in the Russian Federation.^{5*}
11. A copy of the results of the documentation expert review carried out by the Authorized Organization and a document confirming the correction of comments/non-conformances identified during the expert review.
12. Copies of statements and protocols of acceptance/qualification/periodic and delivery and acceptance tests of imported component parts.^{2*}
13. Copy of the quality plan(s) for imported component parts, which passed conformity assessment in the form of acceptance.^{3*}
14. Copy of the document(s) of quality (service list, data sheet, label) for imported component parts and, if available, executed documents of non-conformances and decisions taken registration.
15. Copy of TA/SP for equipment, for which production the imported component parts are applied.
16. A copy of the program of acceptance (for prototypes) and delivery and acceptance tests for equipment in which imported component parts are used during manufacture.
17. A copy of the test programme and procedure for imported component parts during incoming inspection at the manufacturer of equipment, in which imported component parts are used during manufacture.
18. Copy of the documents executed by the results of the input control of imported component parts for manufacturer of equipment, where imported component parts are applied.
19. Copies of statements and protocols of acceptance/qualification/periodic and delivery and acceptance tests for equipment in which imported component parts are used during manufacture.
20. Copies of the Inspection Conclusions for incoming inspection of component parts and testing as part of the equipment.
21. Copies of the agreements (contacts) for delivery (without the financial part).
23. Copies of letters of coordination and approval of the Decision on Application.

DEVELOPED BY:

Equipment Manufacturer developed the Decision

 (name of the manufacturer of equipment and the position of the employee who developed this Decision)

 (signature) (Surname, initials)

_____, 20____

AGREED WITH:

Chief Executive Officer

 (name of the manufacturer of equipment who developed the Decision)

 (signature) (Surname, initials)

_____, 20____

Developer of the Engineering Documentation for Equipment

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20____

Leading Materials Science Organization^{5*}

 (name of the organization and position of the person entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20____

NPP General Designer

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

Reactor Plant Chief Designer^{6*}

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

Deputy Chief Technology Officer for the Relevant
Direction of AKKUYU NÜKLEER ANONİM
ŞİRKETİ

 (name of the position of Deputy Chief Technology Officer for the Relevant Direction of AKKUYU NÜKLEER A.Ş.)

 (signature) (Surname, initials)

_____, 20__

Director for Equipment and Logistic of AKKUYU
NÜKLEER ANONİM ŞİRKETİ

 (signature) (Surname, initials)

_____, 20__

Quality Director of AKKUYU NÜKLEER ANONİM
ŞİRKETİ.

 (signature) (Surname, initials)

_____, 20__

Head of Economic Security Department of AKKUYU
NÜKLEER ANONİM ŞİRKETİ

 (signature) (Surname, initials)

_____, 20__

Note:

1* Indicate if information is available.

2* For imported component parts subject to compliance assessment in the form of tests in accordance with the requirements of GD.AKU.7.4-02-02-0054.

3* For imported component parts subject to compliance assessment in the form of acceptance in accordance with the requirements of GD.AKU.7.4-02-02-0054.

4* When preparing the Decision on application for several units/types of component parts, list of imported component parts shall be made in accordance with Appendix F.

5* Only for equipment subject to federal rules and norms of PNAE G-7-008 and/or NP-068.

6* Coordination by the Reactor Plant Chief Designer is mandatory for equipment, forming part of the reactor plant.

**Appendix 3
(mandatory)**

Form of the Decision on Application of Imported SPTA Supplied to Akkuyu NPP

APPROVED BY

Deputy Director of NPP under Construction –
Chief Technology Officer
of AKKUYU NÜKLEER ANONİM
ŞİRKETİ.

(signature) (Initials, Surname)

_____, 20 ____

DECISION No. _____ **dated** _____

(registration number of the decision)

(registration date)

on application of imported

manufactured by

(name and designation of SPTA)

for power unit No. ____ of Akkuyu NPP.

(name of manufacturer)

(number of power unit)

_____, in accordance with the agreement (contract)
(full name of the manufacturer (country))

(number and date of the agreement (contract) for delivery of SPTA (contract chain shall be disclosed in full))

manufactured _____:

(full name and designation of SPTA or reference to appendix 1)

Classification designation as per NP-001: _____.

Group of equipment as per PNAE G-07-008 ^{1*} _____.

Seismic category as per NP-031: _____.^{1*}

KKS code: _____.^{1*}

TR/TS/TA/SP: _____
(full name and designation of TR/TS/TA/SP for SPTA and information on their coordination and approval)

Quality Management System _____
(name of the manufacturer (country))

is certified for compliance with the requirements of _____,
(name of the standard for compliance with which the QMS is certified)

the certification authority _____
(name of the certification authority)

has issued the certificate _____
(date of issue and certificate number, validity period, scope of certification)

_____ factory No. (Nos.) _____
(name and designation of SPTA) (factory number(s) or reference to appendix 1)

has (have) passed acceptance and delivery and acceptance tests, in accordance with _____
(full name and designation of TPP for SPTA and information on their coordination and approval)

the results are satisfactory.^{2*}

The Authorized Organization _____, according to NP-071, has assessed
(name of the AO)

the compliance in the form of acceptance as per the Quality Plan(s) No. _____
(number(s) of the Quality Plan(s) or reference to appendix 1)

developed in accordance with the requirements of GD.AKU.7.4-02-02-0054.^{3*}
_____ factory No. (Nos.) _____
(name and designation of SPTA) (factory number(s) or reference to appendix 1)

has (have) passed the compliance assessment during the incoming inspection at the Akkuyu NPP
site according to the test programme and procedure _____,
(full name and designation of TPP for SPTA and information on their coordination and approval)

a positive Incoming Inspection Statement was issued _____.
(No. of SPTA Incoming Inspection Statement)

IT WAS RESOLVED:

Apply imported _____
(name and designation of SPTA)
 factory No. (Nos.) _____ manufactured _____
(factory number(s) or reference to appendix 1) (name of the manufacturer (country))
 as per _____
(designation of TR/TS/TA/SP for SPTA)
 for completion of _____
(name and designation of equipment in which SPTA are used, designation of TA/SP)
 of power unit No. _____ of Akkuyu NPP.
(number of power unit)

Appendices:

1. List of imported SPTA.^{4*}
2. Copy of the inspection report on manufacturer’s production readiness before starting the manufacturing of products/auditing of the manufacturer (its subcontractors) for the possibility of manufacturing the products for Akkuyu NPP.
3. Copy of TR/TS/TA/SP for imported SPTA.
4. Copy of the detailed engineering documentation (assembly drawings).
5. Copy of the program of acceptance (for prototype models) and delivery and acceptance tests of imported SPTA.^{2*}
6. Copy of the LMSO expert opinion, including a justification of the possible application of imported semifinished products and welding (surfacing) materials in the manufacturing of imported SPTA and justification of possible application of foreign control methods in the manufacturing of imported SPTA.^{5*}
7. A copy of the results of the documentation expert review carried out by the Authorized Organization and a document confirming the correction of comments/non-conformances identified during the expert review.
8. Copies of statements and protocols of acceptance and delivery and acceptance tests of component parts.^{2*}
9. Copy of the quality plan(s) for imported SPTA, which passed conformity assessment in the form of acceptance.^{3*}
10. Copy of the document(s) of quality (service list, data sheet, label) for imported SPTA and, if available, executed documents of non-conformances and decisions taken registration.
11. A copy of the test programme and procedure of imported SPTA during incoming inspection at the Akkuyu NPP.
12. A copy of the SPTA Incoming Inspection Statement at the Akkuyu NPP.
13. Copies of the agreements (contacts) for delivery (without the financial part).
14. Copies of letters of coordination and approval of the Decision on Application.

DEVELOPED BY:

Organization developed the Decision

(name of the supplier of imported products and the position of the employee who developed this Decision)

(signature) (Surname, initials)
 _____, 20__

AGREED WITH:

Chief Executive Officer

(name of the supplier of imported products of the Decision developer)

(signature) (Surname, initials)
 _____, 20__

Leading Materials Science Organization^{5*}

(name of the organization and position of the employee entitled to approve this Decision)

(signature) (Surname, initials)

_____, 20__

NPP General Designer

(name of the organization and position of the employee entitled to approve this Decision)

(signature) (Surname, initials)

_____, 20__

Reactor Plant Chief Designer^{6*}

(name of the organization and position of the employee entitled to approve this Decision)

(signature) (Surname, initials)

_____, 20__

Deputy Chief Technology Officer for the Relevant
Direction of AKKUYU NÜKLEER ANONİM
ŞİRKETİ

(name of the position of Deputy Chief Technology Officer for the Relevant Direction of AKKUYU NÜKLEER A.Ş.)

(signature) (Surname, initials)

_____, 20__

Director for Equipment and Logistic of AKKUYU
NÜKLEER ANONİM ŞİRKETİ

(signature) (Surname, initials)

_____, 20__

Quality Director of AKKUYU NÜKLEER ANONİM
ŞİRKETİ.

(signature) (Surname, initials)

_____, 20__

Head of Economic Security Department of AKKUYU
NÜKLEER ANONİM ŞİRKETİ

(signature) (Surname, initials)

_____, 20__

Note:

1* Indicate if information is available.

2* For imported SPTA subject to compliance assessment in the form of tests in accordance with the requirements of GD.AKU.7.4-02-02-0054.

3* For imported SPTA subject to compliance assessment in the form of acceptance in accordance with the requirements of GD.AKU.7.4-02-02-0054.

4* When preparing the Decision on application for several units/types of SPTA, list of imported SPTA shall be made in accordance with Appendix F.

5* Only for imported SPTA supplied for equipment subject to federal rules and norms of PNAE G-7-008 and/or NP-068.

6* Coordination by the Reactor Plant Chief Designer is mandatory for equipment, forming part of the reactor plant.

Appendix 2
(mandatory)
Form of the Decision on Application of Imported Semifinished Products/Welding (Surfacing) Materials Used in the Manufacture of Equipment on the Territory of the Russian Federation

APPROVED BY

Deputy Director of NPP under Construction –
Chief Technology Officer
of AKKUYU NÜKLEER ANONİM
ŞİRKETİ.

(signature) (Initials, Surname)

_____, 20 ____

DECISION No. _____ **dated**

(registration number of the decision)

(registration date)

on application of imported _____ manufactured by
(name and designation of semifinished products/welding (surfacing) materials)
_____, for application during manufacturing of
(name of manufacturer)

(name and designation of equipment, where semifinished products/welding (surfacing) materials are applied during manufacturing)
of power unit No. ____ of Akkuyu NPP.
(number of power unit)

_____, in accordance with the agreement (contract)
(full name of the manufacturer (country))

_____,
(number and date of the agreement (contract) for delivery of semifinished products/welding (surfacing) materials (contract chain shall be disclosed in full))

manufactured _____:
(full name and designation of semifinished products/welding (surfacing) materials or reference to appendix 1)

Classification designation as per NP-001: _____.^{1*}

Certificate/License/Data Sheet No.: _____.

Melt No.: _____.^{2*}

Factory/serial No.: _____.^{2*}

Steel grade: _____.^{2*}

Standard size: _____.^{2*}

Batch No.: _____.^{3*}

Welding (surfacing) material grade: _____.^{3*}

TR/TS/TA/SP: _____,
(full name and designation of TR/TS/TA/SP for semifinished products/welding (surfacing) materials and information on their coordination and approval)

are applied _____, in accordance with the agreement (contract)
(full name of Russian manufacturer)

(number and date of the agreement (contract) for delivery of equipment (contract chain shall be disclosed in full))

during manufacturing of _____
(full name and designation of equipment, where semifinished products/welding (surfacing) materials are applied during manufacturing)

of power unit No. ____ of Akkuyu NPP:
(number of power unit)

Classification designation as per NP-001/NP-068: _____.

Group of equipment as per PNAE G-07-008 ^{1*}

Seismic category as per NP-031: _____.

KKS code: _____.^{1*}

TA/SP: _____
(full name and designation of TA/SP for equipment, in which semifinished products/welding (surfacing) materials are used during manufacture and information on their coordination and approval)

Quality Management System _____
(name of the manufacturer (country))

is certified for compliance with the requirements of _____,
(name of the standard for compliance with which the QMS is certified)

the certification authority _____
(name of the certification authority)

has issued the certificate _____
(date of issue and certificate number, validity period, scope of certification)

_____ has assessed the possible application of
(name of LMSO)

_____ and application of
(name and designation of semifinished products/welding (surfacing) materials)

foreign control methods during manufacturing of _____
(name and designation of semifinished products)

for manufacturing of _____
(name and designation of equipment, designation of TA/SP for equipment, where imported semifinished products/welding (surfacing) materials are applied during manufacturing)

of power unit No. ____ of Akkuyu NPP.^{4*}
(number of power unit)

The Authorized Organization _____, according to NP-071, has assessed
(name of the AO)

the compliance in the form of acceptance as per the Quality Plan(s) No. _____,
(number(s) of the Quality Plan(s) or reference to appendix 1)

developed in accordance with the requirements of GD.AKU.7.4-02-02-0054.^{5*}

The Authorized Organization _____, according to NP-071, has assessed
(name of the AO)

the compliance in the form of tests during the incoming inspection at _____,
(name of Russian manufacturer)

as per the test programme and procedure _____
(full name and designation of TPP for semifinished products/welding (surfacing) materials during incoming inspection and information on their coordination and approval)

as per Quality Plan(s) No. _____, developed in accordance with
(number(s) of the Quality Plan(s) for the manufacturing of equipment)

the requirements of GD.AKU.7.4-02-02-0054, a positive Inspection Conclusion(s) No. _____
(number(s) of Inspection Conclusion(s) for incoming inspection of semifinished products/welding (surfacing) materials)

was (were) issued.

IT WAS RESOLVED:

For semifinished products:

Apply _____
(name of semifinished products, steel grade, certificate number, melt number, batch number, factory/serial number, standard size)

manufactured _____
(name of the manufacturer (country))

as per _____
(name and designation of TR/TS/TA/SP for semifinished products)

for manufacturing of _____ of power unit No. ____ of Akkuyu NPP.
(name and designation of equipment in which semifinished products are used, designation of TA/SP) (number of power unit)

For welding (surfacing) materials:

Apply _____
(name of welding (surfacing) materials, brand, batch number, certificate number)

manufactured _____
(name of the manufacturer (country))

as per _____
(name and designation of TR/TS/TA/SP for welding (surfacing) materials)

for manufacturing of _____ of power unit No. ____ of Akkuyu NPP.
(name and designation of equipment in which semifinished products are used, designation of TA/SP) (number of power unit)

Appendices:

1. List of imported semifinished products, welding (surfacing) materials.^{6*}

2. Copy of the inspection report on manufacturer’s production readiness before starting the manufacturing of products/auditing of the manufacturer (its subcontractors) for the possibility of manufacturing the products for Akkuyu NPP.
3. Copy of TR/TS/TA/SP for imported semifinished products, welding (surfacing) materials.
4. Copy of the quality plan(s) for imported semifinished products, which passed conformity assessment in the form of acceptance.^{5*}
5. Copy of the LMSO expert opinion, including a justification of the possible application of imported semifinished products, welding (surfacing) materials and justification of possible application of foreign control methods in the manufacturing of imported semifinished products for the application in equipment produced in the Russian Federation for Akkuyu NPP.^{4*}
6. A copy of the results of the documentation expert review carried out by the Authorized Organization and a document confirming the correction of comments/non-conformances identified during the expert review.
7. Copy of the document(s) of quality (service list, data sheet, label, certificate) for semifinished products, welding (surfacing) materials and, if available, executed documents of non-conformances and decisions taken registration.
8. Copy of TA/SP, for equipment, for which production the imported semifinished products/welding (surfacing) materials are applied.
9. A copy of the test programme and procedure for imported semifinished products, welding (surfacing) materials during incoming inspection at the manufacturer of equipment, in which imported semifinished products, welding (surfacing) materials are used during manufacture.
10. Copy of documents drawn up based on the results of incoming inspection of imported semifinished products, welding (surfacing) materials at the manufacturer of equipment, in which imported semifinished products, welding (surfacing) materials are used.
11. Copies of the Inspection Conclusions.
12. Copies of the agreements (contacts) for delivery (without the financial part).
13. Copies of letters of coordination and approval of the Decision on Application.

DEVELOPED BY:

Equipment Manufacturer developed the Decision

 (name of the manufacturer of equipment and the position of the employee who developed this Decision)

 (signature) (Surname, initials)
 _____, 20__

AGREED WITH:

Chief Executive Officer

 (name of the manufacturer of equipment who developed the Decision)

 (signature) (Surname, initials)
 _____, 20__

Developer of the Engineering Documentation for
 Equipment

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)
 _____, 20__

Leading Materials Science Organization^{4*}

 (name of the organization and position of the person entitled to approve this Decision)

 (signature) (Surname, initials)
 _____, 20__

NPP General Designer

(name of the organization and position of the employee entitled to approve this Decision)

(signature) (Surname, initials)

_____, 20__

Reactor Plant Chief Designer^{7*}

(name of the organization and position of the employee entitled to approve this Decision)

(signature) (Surname, initials)

_____, 20__

**Deputy Chief Technology Officer for the Relevant
Direction of AKKUYU NÜKLEER ANONİM
ŞİRKETİ**

(name of the position of Deputy Chief Technology Officer for the Relevant
Direction of AKKUYU NÜKLEER A.Ş.)

(signature) (Surname, initials)

_____, 20__

**Director for Equipment and Logistic of AKKUYU
NÜKLEER ANONİM ŞİRKETİ**

(signature) (Surname, initials)

_____, 20__

**Quality Director of AKKUYU NÜKLEER
ANONİM ŞİRKETİ.**

(signature) (Surname, initials)

_____, 20__

**Head of Economic Security
Department of AKKUYU NÜKLEER ANONİM
ŞİRKETİ**

(signature) (Surname, initials)

_____, 20__

Note:

1* Indicate if information is available.

2* For semifinished products only.

3* For welding (surfacing) materials only.

4* Only for imported semifinished products and welding (surfacing) materials applied in the manufacturing/completing of equipment, which is covered by federal norms and rules of PNAE G-7-008 or NP-068.

5* For imported semifinished products subject to compliance assessment in the form of acceptance in accordance with the requirements of GD.AKU.7.4-02-02-0054.

6* When the Decision on Application is prepared for several units/types of imported semifinished products, welding (surfacing) materials, list of imported component parts, it shall be executed in accordance with Appendix F.

7* Coordination by the Reactor Plant Chief Designer is mandatory for equipment, forming part of the reactor plant.

Appendix 5
(mandatory)

**Form of the Decision on Application of Imported Semifinished Products, Welding
(Surfacing) Materials Supplied to Akkuyu NPP**

APPROVED BY

Deputy Director of NPP under Construction –
Chief Technology Officer
of AKKUYU NÜKLEER ANONİM
ŞİRKETİ.

(signature) (Initials, Surname)

_____, 20 ____

DECISION No. _____ **dated** _____

(registration number of the decision)

(registration date)

on application of imported _____ manufactured by _____

(name and designation of semifinished products/welding (surfacing) materials)

_____, for power unit No. ____ of Akkuyu NPP.

(name of manufacturer)

(number of power unit)

_____, in accordance with the agreement (contract)

(full name of the manufacturer (country))

(number and date of the agreement (contract) for delivery of semifinished products/welding (surfacing) materials (contract chain shall be disclosed in full))

manufactured _____:

(full name and designation of semifinished products/welding (surfacing) materials or reference to appendix 1)

Classification designation as per NP-001: _____.^{1*}

Certificate/License/Data Sheet No.: _____.

Melt No.: _____.^{2*}

Factory/serial No.: _____.^{2*}

Steel grade: _____.^{2*}

Standard size: _____.^{2*}

Batch No.: _____.^{3*}

Welding (surfacing) material grade: _____.^{3*}

TR/TS/TA/SP: _____.

(full name and designation of TR/TS/TA/SP for semifinished products/welding (surfacing) materials and information on their coordination and approval)

Quality Management System _____

(name of the manufacturer (country))

is certified for compliance with the requirements of _____,

(name of the standard for compliance with which the QMS is certified)

the certification authority _____

(name of the certification authority)

has issued the certificate _____.

(date of issue and certificate number, validity period, scope of certification)

_____ has assessed the possible application of

(name of LMSO)

_____ and application of

(name and designation of semifinished products/welding (surfacing) materials)

foreign control methods during manufacturing of _____

(name and designation of semifinished products)

for manufacturing of _____

(name and designation of equipment, designation of TA/SP for equipment, where imported semifinished products/welding (surfacing) materials are applied during manufacturing)

of power unit No. ____ of Akkuyu NPP.^{4*}

(number of power unit)

The Authorized Organization _____, according to NP-071, has assessed the compliance in the form of acceptance as per the Quality Plan(s) No. _____, developed in accordance with the requirements of GD.AKU.7.4-02-02-0054.^{5*}

Compliance assessment was carried out in the form of tests during incoming inspection at the Akkuyu NPP site as per _____, Positive Incoming Inspection Statement(s) was(were) issued _____.

IT WAS RESOLVED:

For semifinished products:

Apply _____
(name of semifinished products, steel grade, certificate number, melt number, batch number, factory/serial number, standard size)

manufactured _____
(name of the manufacturer (country))

as per _____
(name and designation of TR/TS/TA/SP for semifinished products)

for power unit No. ____ of Akkuyu NPP.
(number of power unit)

For welding (surfacing) materials:

Apply _____
(name of welding (surfacing) materials, brand, batch number, certificate number)

manufactured _____
(name of the manufacturer (country))

as per _____
(name and designation of TR/TS/TA/SP for welding (surfacing) materials)

for power unit No. ____ of Akkuyu NPP.
(number of power unit)

Appendices:

1. List of imported semifinished products, welding (surfacing) materials.^{6*}
2. Copy of the inspection report on manufacturer's production readiness before starting the manufacturing of products/auditing of the manufacturer (its subcontractors) for the possibility of manufacturing the products for Akkuyu NPP.
3. Copy of TR/TS/TA/SP for imported semifinished products, welding (surfacing) materials.
4. Copy of the quality plan(s) for imported semifinished products, which passed conformity assessment in the form of acceptance.^{5*}
5. Copy of the LMSO expert opinion, including a justification of the possible application of imported semifinished products, welding (surfacing) materials and justification of possible application of foreign control methods in the manufacturing of imported semifinished products for the application for Akkuyu NPP.^{4*}
6. A copy of the results of the documentation expert review carried out by the Authorized Organization and a document confirming the correction of comments/non-conformances identified during the expert review.
7. Copy of the document(s) of quality (service list, data sheet, label, certificate) for semifinished products, welding (surfacing) materials and, if available, executed documents of non-conformances and decisions taken registration.
9. A copy of the test programme and procedure for imported semifinished products, welding (surfacing) materials during the incoming inspection of the Akkuyu NPP.
10. A copy of the Incoming Inspection Statements(s) at the Akkuyu NPP site, drawn up based on the results of the incoming inspection of imported semifinished products, welding (surfacing) materials at the Akkuyu NPP.
12. Copies of the agreements (contacts) for delivery (without the financial part).

*

13. Copies of letters of coordination and approval of the Decision on Application.

DEVELOPED BY:

Organization developed the Decision

 (name of the supplier of imported products and the position of the employee who developed this Decision)

 (signature) (Surname, initials)

_____, 20__

AGREED WITH:

Chief Executive Officer

 (name of the supplier of imported products of the Decision developer)

 (signature) (Surname, initials)

_____, 20__

Developer of the Engineering Documentation for
 Equipment

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

Leading Materials Science Organization^{4*}

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

NPP General Designer

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

Reactor Plant Chief Designer^{7*}

 (name of the organization and position of the employee entitled to approve this Decision)

 (signature) (Surname, initials)

_____, 20__

Deputy Chief Technology Officer for the Relevant
 Direction of AKKUYU NÜKLEER ANONİM
 ŞİRKETİ

 (name of the position of Deputy Chief Technology Officer for the Relevant Direction of AKKUYU NÜKLEER A.Ş.)

 (signature) (Surname, initials)

_____, 20__

Director for Equipment and Logistic of AKKUYU
 NÜKLEER ANONİM ŞİRKETİ

 (signature) (Surname, initials)

_____, 20__

Quality Director of AKKUYU NÜKLEER ANONİM
 ŞİRKETİ.

 (signature) (Surname, initials)

_____, 20__

Head of Economic Security
Department of AKKUYU NÜKLEER ANONİM
ŞİRKETİ

(signature) (Surname, initials)

_____, 20____

Note:

1* Indicate if information is available.

2* For semifinished products only.

3* For welding (surfacing) materials only.

4* Only for imported semifinished products and welding (surfacing) materials applied in the manufacturing/completing of equipment, which is covered by federal norms and rules of PNAE G-7-008 and/or NP-068.

5* For imported semifinished products subject to compliance assessment in the form of acceptance in accordance with the requirements of GD.AKU.7.4-02-02-0054.

6* When the Decision on Application is prepared for several units/types of imported semifinished products, welding (surfacing) materials, list of imported component parts, it shall be executed in accordance with Appendix F.

7* Coordination by the Reactor Plant Chief Designer is mandatory for equipment, forming part of the reactor plant.

Appendix 6
(mandatory)

Form of Appendix No.1 to the Decision on Application for Several Units/Types of Products

List of equipment/SPTA

Item	Name	Designation	KKS code	Classified designation as per NP-001 (NP 068)/ Group of equipment as per PNAE G-07-008- 89/ Seismic category as per NP-031	TR/TS (TA/SP)	Factory number	Quality Plan number	Quantity	Electric drive (for imported equipment supplied with imported electric drives)				Note
									Grade, type, TR/TS (TA/SP)	Manufacturer	Quality Plan number	Factory number	
1	2	3	4	5	6	7	8	9	10	11	12	13	14

List of component parts

Item	Name	Designation	KKS code	Classified designation as per NP-001 (NP 068)/ Group of equipment as per PNAE G-07-008- 89/ Seismic category as per NP-031	TR/TS (TA/SP)	Number of quality plan/number of a document drawn up based on the results of the incoming inspection of component parts at the equipment manufacturer	Factory (serial) number	Quantity	Equipment, where component parts are applied				Note
									Name	Designation	TA/SP	Classified designation as per NP-001 (NP 068)/ Group of equipment as per PNAE G-07-008- 89/ Seismic category as per NP-031	
1	2	3	4	5	6	7	8	9	10	11	12	13	14

List of fittings

Item	Name	Designation	KKS code	Classified designation as per NP-001 (NP 068)/ Group of equipment as per PNAE G-07-008- 89/ Seismic category as per NP-031	TR/TS (TA/SP)	Factory number	Quality Plan number	Quantity	Body material	DN (Dy)	Pp, MPa	Tp, °C	Control method	Electric drive				Note
														Grade, type, TR/TS (TA/SP)	Manufacturer	Quality Plan number	Factory number	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

List of semifinished products/welding (surfacing) materials

Item	Name	Steel grade/ Welding material grade	KKS code	Classification designation as per NP-001	TR/TS (TA/SP)	Batch number	Melt number	Standard size	Certificate/license/data sheet number	Factory (serial) number	Quality Plan number	Quantity	Equipment, where semifinished products/welding (surfacing) materials will be applied				Note
													Name	Designation	TA/SP	Classified designation as per NP-001 (NP 068)/ Group of equipment as per PNAE G-07-008- 89/ Seismic category as per NP-031	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

**Appendix 7
(mandatory)**
**List of Documentation Subject to Review and Analysis/Expert Review by the Authorized
Organization**

Technical Documentation	List of Issues
7.1 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for reactor constituent parts	
1. General view drawings, assembly drawings, specification, data sheet form	<p>1.1. Correct designation and execution of documents.</p> <p>1.2. Sufficiency of the accepted marking for identification of parts, assembly units of equipment, its detachable and spare parts, as well as separable and welded joints (weld overlays) during the manufacturing, installation and operation of equipment.</p> <p>1.3. Justification of classifying equipment as components and systems important for NPP safety (safety class, classification designation, equipment group, seismic category).</p> <p>1.4. Justification of the choice of basic and welding (surfacing) materials for the conditions of application of equipment at NPP, including justification of the choice of materials for anti-corrosion coatings and sealing weld overlays, taking into account the assigned service life of the equipment; resistance of corrosion coatings and sealing weld overlays to radiation and temperature embrittlement and to the effects of boric acid solutions, decontamination solutions, water chemistry of coolant.</p> <p>1.5. Justification of the choice of materials for thermal and biological protection.</p> <p>1.6. Sufficiency of design solutions to exclude water hammers and minimize possible local erosion and corrosion damage to the equipment metal.</p> <p>1.7. Justification of technical requirements for separable joints (studs, washers, nuts, bolts, gaskets, sealing surfaces, stud seats, lubricants), tightening torques, locking methods.</p> <p>1.8. Availability and sufficiency of fitting the equipment with safety devices; indicating, signalling and recording devices; drainage and blowing devices; temperature, pressure, tightness control sensors; samplers.</p> <p>1.9. Sufficiency of design solutions to compensate for thermal displacements and minimize vibration and noise characteristics of equipment during its operation.</p> <p>1.10. Availability and acceptability of requirements in the engineering documentation for the completeness of the equipment being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. Strength calculation	<p>2.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>2.2. Completeness of accounting for influencing factors when performing calculations.</p> <p>2.3. Compliance with the conditions of strength and stability based on the results of strength calculations and seismic resistance calculations.</p>

Technical Documentation	List of Issues
	<p>2.4. Justification of the established resource characteristics and the assigned service life of the equipment.</p> <p>2.5. Justification of establishing the most loaded zones of equipment for periodic monitoring of their condition during operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Tables of quality control of welded joints (weld overlays) and base metal	<p>3.1. Compliance of the established methods of destructive and non-destructive tests of equipment metal and compliance of the scope of tests using these methods to the requirements of federal rules and norms.</p> <p>3.2. Availability and sufficiency of control samples to confirm the properties of metal during the manufacturing and installation of equipment</p>
4. Work program with surveillance specimen	<p>4.1. Availability and sufficiency of surveillance specimen to monitoring degradation of metal properties during the specified service life of the equipment.</p> <p>4.2. Justification of the location of containers with surveillance specimen, justification of the frequency of unloading and monitoring.</p> <p>4.3. Sufficiency of substantiations for the reliability of the design of containers for placing surveillance specimen.</p> <p>4.4. Applicability of the program of work with surveillance specimen for advanced prediction of the degree of radiation and temperature embrittlement of equipment metal</p>
5. Programs and procedures for acceptance and delivery and acceptance tests	<p>5.1. Sufficiency of the scope of tests established in the acceptance test program and in the delivery and acceptance test program to confirm the required characteristics, parameters and properties of the equipment.</p> <p>5.2. Acceptability of simulation of operating conditions when testing equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
6. Instructions for preservation (re-preservation), transportation and storage	<p>6.1. Sufficiency of organizational and technical measures and requirements established by the equipment developer to minimize the likelihood of mechanical and other damage to the equipment during loading and unloading operations, transportation, storage and installation of equipment.</p>
7. Manuals (instructions) for installation, maintenance and repair	<p>7.1. Sufficiency of detailing of preparatory work and equipment installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts, etc. <p>7.2. Justification of the scope and frequency of equipment maintenance, including justification of standards for fault detection of wearing parts.</p> <p>7.3. Availability and sufficiency of instructions on the possibility and methods of repairs, instructions on documenting the repairs carried out and</p>

Technical Documentation	List of Issues
	<p>the results of monitoring repaired sections and equipment parts.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
8. Operation manual (instruction)	<p>8.1. Availability and sufficiency of instructions for preparing equipment for commissioning, including:</p> <ul style="list-style-type: none"> - installation of reactor internals; - loading of nuclear fuel and surveillance specimen; - sealing; - filling with coolant; - startup and adjustment. <p>8.2. Availability and justification of the established conditions and limits for safe operation of equipment, including the permissible heating and cooldown rates.</p> <p>8.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring of equipment zones.</p> <p>8.4. Availability and acceptability of methods for monitoring the established resource characteristics of the equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
9. Quality control program (if any)	<p>Verify:</p> <p>9.1. Sufficiency of control operations.</p> <p>9.2. Compliance of the program with the requirements of OST 108.004.10-86</p>
7.2 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation of thermal and mechanical (heat and power, mechanical and water treatment) equipment	
1. Draft TR/TS/TA/SP	<p>1.1. Correctness of execution: the presence of signatures with dates (developer, compliance supervisor), inventory number, stamp of the registered copy, as well as the correct execution and approval of the document and changes (if any).</p> <p>1.2. Availability of the name of the equipment, its purpose, scope, main modes, operating conditions, service life, resource characteristics.</p> <p>1.3. Completeness of accounting for functional indicators (destination indicators), including: type of coolant, operating temperatures of each coolant at the inlet and outlet of the heat exchanger, operating and design pressure of coolants, power at rated parameters, hydraulic resistance at nominal flow rate, operating position, design weight, climatic conditions.</p> <p>1.4. Compliance of parameters and characteristics of equipment with the reference technical specifications, including: the name of equipment, classification of equipment, its purpose, scope, main modes, operating conditions, functional indicators (destination indicators), reliability indicators, resource characteristics.</p> <p>1.5. Availability of requirements for completeness (component parts, control process samples, list of spare parts and tools, list of documentation) and their sufficiency for installation, maintenance, repair and operation.</p> <p>1.6. Sufficiency of measures to prevent contamination (quality of environment, filtration system), as well as measures to ensure operation in</p>

Technical Documentation	List of Issues
	<p>emergency modes.</p> <p>1.7. Sufficiency of measures to reduce the impact on equipment of corrosion, erosive and corrosive wear or other physicochemical effects of the working medium and decontamination solutions.</p> <p>1.8. Sufficiency and justification of measures for loss of tightness, including measures for flushing, purging and filling with the working medium(media) after the damage has been eliminated.</p> <p>1.9. Adequacy of the measures taken to thermally insulate the equipment (if necessary).</p> <p>1.10. Sufficiency of requirements for preservation, packing, transportation and storage, taking into account the impact of climatic and external mechanical factors.</p> <p>1.11. Adequacy of requirements for equipment resistance to external factors and requirements for reliability.</p> <p>1.12. Justification of the choice of materials for sealing parts and justification of the service life of these parts.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. Assembly drawings (general view drawings)	<p>2.1. Correctness of execution: the presence of signatures with dates (developer, compliance supervisor), inventory number, stamp of the registered copy, as well as the correct execution and approval of changes (if any).</p> <p>2.2. Availability of labelling requirements and their sufficiency for identification of parts, assembly units of equipment, its detachable and spare parts, as well as separable and welded joints (weld overlays) during the manufacturing, installation and operation of equipment.</p> <p>2.3. Sufficiency of measures to ensure tightness, as well as to ensure the absence of water hammers during transient conditions.</p> <p>2.4. Sufficiency of design solutions to ensure commissioning (filling with medium, removing air through air vents), operation (inspection, collection and drainage of organized leaks, the ability to remove corrosion products and contaminations, the ability to freely drain the medium from cavities) and repair, including replacement of gaskets.</p> <p>2.5. Sufficiency of fitting the equipment with safety devices, drainage and blowing devices, temperature and pressure control sensors, external and internal leakage control sensors, samplers.</p> <p>2.6. Compliance with the requirements for design, location of welded joints, the distance between them.</p> <p>2.7. Compliance of the design of weld grooves with pipelines.</p> <p>2.8. Compliance with the requirements for design of covers and bottoms, location of manholes and openings.</p> <p>2.9. Availability of all necessary overall, installation and connection dimensions.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>

Technical Documentation	List of Issues
3. Calculations	<p>3.1. Acceptability of the use of software tools and calculation programs for calculations.</p> <p>3.2. Availability of strength calculations and their compliance with requirements, including in terms of completeness of accounting for influencing factors, design temperature and pressure, acceptability of accepted assumptions, indications of the most loaded zones of equipment for periodic monitoring of their condition during operation, as well as conclusions on the fulfilment of strength conditions according to calculation results (including for support structures).</p> <p>3.3. Availability of thermohydraulic calculations, including determination of temperature, pressure and flow rate of the coolant, diameter of the heat pipelines, heating area of the equipment, and justification of the calculation methods used.</p> <p>3.4. Justification of the choice of the optimal criterion for killing pipes, which will ensure minimum economic losses while maintaining sufficient level of safety.</p> <p>3.5. Availability of a calculation for seismic resistance, as well as availability and sufficiency of conclusions confirming seismic resistance of the equipment.</p> <p>3.6. Availability of a calculation for reliability, confirming the reliability indicators specified in the draft TA/SP, as well as sufficiency of these calculation justifications.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
4. Quality control tables for base metal	<p>4.1. Justification of the choice of basic materials for the conditions of application of equipment at NPP, including justification of the choice of materials, taking into account the assigned service life of the equipment; resistance of corrosion coatings and sealing weld overlays to radiation and temperature embrittlement and to the effects of boric acid solutions, decontamination solutions, water chemistry of coolant, as well as the interaction of materials in direct contact with each other.</p> <p>4.2. Compliance and sufficiency of methods of destructive and non-destructive tests of equipment metal and compliance of the scope of tests using these methods to the requirements of federal rules and norms.</p> <p>4.3. Availability and sufficiency of control samples to confirm the properties of metal during the manufacturing and installation of equipment.</p> <p>4.4. Availability and acceptability of references to regulatory documents, together with which the quality control tables for base metal are considered and which also establish requirements for scope, methods and criteria of monitoring</p>
5. Quality control tables for welded joints (weld overlays)	<p>5.1. Justification of the choice of welding (surfacing) materials for the conditions of application of equipment at NPPs.</p> <p>5.2. Compliance of the used welding materials with the established requirements.</p> <p>5.3. Compliance of methods and scope of monitoring with established requirements.</p> <p>5.4. Availability and acceptability of references to regulatory documents,</p>

Technical Documentation	List of Issues
	<p>together with which the quality control tables for welded joints (weld overlays) are considered and which also establish requirements for scope, methods and criteria of monitoring.</p> <p>5.5. Compliance of the requirements for welds and weld overlays with mandatory requirements (category, designation, location)</p>
<p>6. Programs and procedures for acceptance, type and delivery and acceptance tests</p>	<p>6.1. Sufficiency of the scope of tests established in the acceptance test program and in the delivery and acceptance test program to confirm the required characteristics, parameters and properties of the equipment.</p> <p>6.2. Acceptability of simulation of operating conditions when testing equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>7. Operation manual</p>	<p>7.1. Availability and sufficiency of instructions for preparing equipment for commissioning, including:</p> <ul style="list-style-type: none"> - sealing; - filling with medium; - startup and adjustment. <p>7.2. Availability and justification of the established conditions and limits for safe operation of equipment, including the permissible heating and cooldown rates.</p> <p>7.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring</p> <p>7.4. Availability and acceptability of methods for monitoring the established resource characteristics of the equipment during its operation.</p> <p>7.5. Justification of the use of measuring instruments, measurement techniques as part of the equipment, and sufficiency of the established lists of measured parameters, ranges and requirements for measurement accuracy.</p> <p>7.6. Availability and sufficiency of the established methods, means and frequency of operational monitoring.</p> <p>7.7. Availability and acceptability of methods for monitoring the established resource characteristics of the ventilation system equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>8. Instructions for installation, maintenance and repair</p>	<p>8.1. Sufficiency of detailing of preparatory work and equipment installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts, etc.; - procedure for preparation of start-up, procedure of start-up, shutdown, maintenance and repair; - a list of situations when the equipment should be turned off

Technical Documentation	List of Issues
	<p>8.2. Reasonableness of the scope and frequency of equipment maintenance, including justification of standards for fault detection of wearing parts and requirements for flushing and purging.</p> <p>8.3. Availability and sufficiency of instructions on the possibility and methods of repairs, instructions on documenting the repairs carried out and the results of monitoring repaired sections and equipment parts.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7.3 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for I&C, APCS equipment	
<p>1. Draft TR/TS/TA/SP</p>	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Completeness of accounting for functional indicators (indicators of designation).</p> <p>1.3. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of I&C, APCS equipment and its limiting values; - of fire safety; - of electric safety; - of degree of protection of enclosures (IP code); - of radiation safety; - for structure; - for seismic resistance; - of resistance to EFA, including in accident conditions; - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for resistance to aggressive corrosive atmospheric agents; - for electromagnetic compatibility; - for product unification; - for environment protection; - for types of supply and replenishment. <p>1.4. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>1.5. Availability and sufficiency of the envisaged methods for monitoring the compliance of I&C, APCS equipment to the established requirements.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>2. Electrical circuits: - structural;</p>	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Compliance of circuits with electrical requirements of the Unified</p>

Technical Documentation	List of Issues
<ul style="list-style-type: none"> - functional; - elementary (complete); - connections (assembly) circuits; - connecting circuits; - general; - arrangement; - unified 	<p>System of Design Documentation.</p> <p>2.3. Availability of information in scope sufficient for the design, manufacture, operation and repair of I&C, APCS equipment.</p> <p>2.4. Availability of an unambiguous connection, which provides the ability to quickly find the same components (devices, functional groups), connections or joints on all circuits of a given set.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>3. General view drawings, assembly drawings, specification</p>	<p>3.1. Correct designation and execution of documents.</p> <p>3.2. Justification and sufficiency of design solutions to meet the requirements established in the technical specifications of requirements.</p> <p>3.3. Justification and sufficiency of established requirements for compliance assessment in the form of tests and acceptance.</p> <p>3.4. Justification and sufficiency of established methods for monitoring the compliance of I&C, APCS equipment to the established requirements.</p> <p>3.5. Justification of application of imported component parts (if applicable).</p> <p>3.6. Availability and acceptability of requirements in the engineering documentation for the completeness of I&C, APCS equipment and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>3.7. Availability and sufficiency of I&C, APCS equipment with safety devices, indicating and signalling and recording devices, temperature and tightness control sensors.</p> <p>3.8. Availability and sufficiency of I&C, APCS equipment with means against unauthorized access.</p> <p>3.9. Availability and sufficiency of I&C, APCS equipment with means maintaining a given thermal mode.</p> <p>3.10. Availability and sufficiency of I&C, APCS equipment with diagnostic tools.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>4. Program for preliminary complex and/or autonomous tests and delivery and acceptance tests</p>	<p>4.1. Sufficiency of the scope of tests to confirm the required characteristics, parameters and properties of I&C, APCS.</p> <p>4.2. Acceptability of simulation of operating conditions when testing I&C, APCS.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>5. Instructions for preservation (re-preservation), transportation and storage</p>	<p>5.1. Sufficiency of organizational and technical measures and requirements established by the I&C and APCS equipment developer to minimize the likelihood of mechanical and other damage to the I&C, APCS equipment during loading and unloading operations, transportation, storage and installation of equipment.</p>

Technical Documentation	List of Issues
	Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.
6. Instructions for installation, maintenance and repair	<p>6.1. Sufficiency of detailing of preparatory work and installation of I&C, APCS equipment, including the requirements required for installation, commissioning, start-up, regulation, initial run and commissioning of I&C, APCS equipment and its constituent parts into operation at the site of application.</p> <p>6.2. Justification of the scope and frequency of maintenance of I&C, APCS equipment.</p> <p>6.3. Availability and sufficiency of instructions on the possibility and methods of repairs, instructions on documenting the repairs carried out and the results of monitoring repaired I&C, APCS equipment.</p>
7. Operation manual (instruction)	<p>7.1. Availability and sufficiency of information on product design, operating principle, characteristics (properties), its component parts and instructions, required for correct and safe operation of the product (use as intended, maintenance, routine maintenance, storage and transportation) and assessments of its technical condition when defining the requirement of sending it for repairs, and information on disposal of I&C, APCS equipment and its constituent parts.</p> <p>7.2. Availability and acceptability of methods for monitoring the established resource characteristics of I&C, APCS equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
8. Service list	8.1. Availability and completeness of information, certifying manufacturer's warranty, values of the basic product parameters and characteristics, information, reflecting the technical condition of I&C, APCS equipment, information on certification and disposal, and information, which is input during its operation (duration and conditions of operation, maintenance, repair and other data).
9. Data sheet	9.1. Availability and completeness of information certifying the manufacturer's warranty, the values of the main parameters and characteristics (properties) of the product, as well as information on certification and disposal of I&C, APCS equipment.
7.4 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for pipeline parts and assembly units	
1. Drawings of parts and assembly units, assembly drawings of pipelines, specification, data sheet form	<p>1.1. Correct designation and execution of documents.</p> <p>1.2. Sufficiency of the accepted marking for identification of pipeline parts and assembly units, as well as separable and welded joints (weld overlays) during the manufacturing, installation and operation of pipelines.</p> <p>1.3. Justification of classifying pipeline parts and assembly units as components and systems important for NPP safety (safety class, classification designation, group of pipeline parts and assembly units, seismic category).</p> <p>1.4. Justification of the choice of basic and welding (surfacing) materials for the conditions of application of pipeline parts and assembly units at NPP, including justification of the choice of materials for anti-corrosion coatings,</p>

Technical Documentation	List of Issues
	<p>taking into account the assigned service life of pipeline parts and assembly units; resistance of corrosion coatings and sealing weld overlays to radiation and temperature embrittlement, thermal ageing and to the effects of boric acid solutions, decontamination solutions, water chemistry of coolant.</p> <p>1.5. Availability and acceptability of requirements in the engineering documentation for the completeness of pipeline parts and assembly units being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>1.6. Compliance with the requirements for welding parts and assembly units to pipelines.</p> <p>1.7. Need for heat treatment of pipeline parts and assembly units</p>
2. Strength calculation	<p>2.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>2.2. Completeness of accounting for influencing factors when performing calculations.</p> <p>2.3. Compliance with the conditions of strength and stability based on the results of strength calculations and seismic resistance calculations.</p> <p>2.4. Justification of established resource characteristics and assigned service life of pipeline parts and assembly units.</p> <p>2.5. Justification of indicating the most loaded zones of equipment for periodic monitoring of their condition during operation.</p> <p>2.6. Justification of requirements for design and for strength calculation of the pipeline hanger-support system</p>
3. Tables of quality control of welded joints (weld overlays) and base metal	<p>3.1. Compliance of the established methods of destructive and non-destructive tests of metal of pipeline parts and assembly units and compliance of the scope of tests using these methods to the requirements of federal rules and norms.</p> <p>3.2. Availability and sufficiency of control samples to confirm the properties of metal during the manufacturing and installation of pipeline parts and assembly units</p>
6. Program for acceptance and delivery and acceptance tests	<p>4.1. Sufficiency of the scope of tests established in the acceptance test program and in the delivery and acceptance test program to confirm the required characteristics, parameters and properties of the pipeline parts and assembly units.</p> <p>4.2. Acceptability of simulation of operating conditions when testing pipeline parts and assembly units.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
5. Transportation and storage manual	<p>5.1. Sufficiency of organizational and technical measures and requirements established by the developer of pipeline parts and assembly units to minimize the likelihood of mechanical and other damage to pipeline parts and assembly units during loading and unloading operations, transportation, storage and installation of pipeline parts and assembly units</p>
6. Instructions for installation, maintenance and repair	<p>6.1. Sufficiency of detailing of preparatory work and operations for the installation of pipeline parts and assembly units, including the requirements for:</p> <ul style="list-style-type: none"> - cleanliness of rooms;

Technical Documentation	List of Issues
	<ul style="list-style-type: none"> - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding, etc. <p>6.2. Justification of scope and frequency of pipeline maintenance, including justification of the standards for defect detection of replaced parts and assembly units.</p> <p>6.3. Availability and sufficiency of instructions on the possibility and methods of repairs, instructions on documenting the repairs carried out and the results of monitoring repaired sections of pipelines.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7. System operation manual (instruction)	<p>7.1. Availability and sufficiency of instructions for preparing system pipelines for commissioning, including:</p> <ul style="list-style-type: none"> - filling with coolant; - startup and adjustment of system pipelines. <p>7.2. Availability and justification of the established conditions and limits for safe operation of system pipelines, including the permissible heating and cooldown rates.</p> <p>7.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring of pipeline sections.</p> <p>7.4. Availability and acceptability of methods for monitoring the established resource characteristics of the pipeline during its operation</p>
7.5 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for ventilation system equipment	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Confirmation of basic technical data and characteristics specified by the NPP designer and by the operating organization, including basic requirements for ventilation systems important to safety.</p> <p>1.3. Compliance of parameters and characteristics of ventilation equipment given in the technical assignment, with the original specifications; completeness of accounting for functional indicators (purpose indicators), including the modes of changing the medium parameters.</p> <p>1.4. Physical and mechanical characteristics of materials for sealing products used in ventilation equipment.</p> <p>1.5. Completeness of accounting for functional indicators (indicators of designation).</p> <p>1.6. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of ventilation system equipment and its limiting values; - of fire safety; - of electric safety; - of degree of protection of enclosures (IP code); - of radiation safety; - for structure; - for seismic resistance;

Technical Documentation	List of Issues
	<ul style="list-style-type: none"> - of resistance to EFA, including in accident conditions; - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for resistance to aggressive corrosive atmospheric agents; - for electromagnetic compatibility; - for quality assurance; - for product unification; - for environmental protection. <p>1.7. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>1.8. Availability and sufficiency of methods for monitoring the compliance of ventilation system equipment to the established requirements.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. Assembly drawings, specification, data sheet form	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Overall dimensions (including mounting dimensions), sketches of bevelling, connecting dimensions, attachment points to civil structures.</p> <p>2.3. Justification of classifying ventilation system equipment as components and systems important for NPP safety (safety class, classification designation, seismic category and seismic stability category).</p> <p>2.4. Justification of choice of semifinished products, basic and welding materials for the conditions of application of ventilation system equipment at NPPs, including justification of choice of materials that meet the requirements for protection against erosive wear, anti-corrosion coatings, taking into account the assigned service life of ventilation system equipment, resistance to decontamination solutions.</p> <p>2.5. Justification of technical requirements for separable joints (studs, washers, nuts, bolts, gaskets, sealing surfaces, stud seats, lubricants), tightening torques, locking methods.</p> <p>2.6. Availability and acceptability of requirements in the engineering documentation for the completeness of the ventilation system equipment, for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>2.7. Justification of need (or lack thereof) in the built-in tools and/or the possibility of connecting external means of technical diagnostics.</p> <p>2.8. Sufficiency of the accepted markings, safety class and product designation, steel grade and melt numbers (for casings made of castings).</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Strength calculations	<p>3.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>3.2. Completeness of accounting for influencing factors when performing calculations, taking into account the loads transmitted from the air ducts.</p> <p>3.3. Compliance with the conditions of strength and stability based on the</p>

Technical Documentation	List of Issues
	<p>results of strength calculations and seismic resistance calculations.</p> <p>3.4. Justification of the established resource characteristics and the assigned service life of the ventilation system equipment.</p>
<p>4. Program of acceptance, type, qualification, periodic and delivery and acceptance tests</p>	<p>4.1. Sufficiency of the scope of tests established in the program of acceptance, type, qualification, periodic and delivery and acceptance tests to confirm the required characteristics, parameters and properties of the ventilation system equipment.</p> <p>4.2. Acceptability of simulation of operating conditions when testing ventilation system equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>5. Instructions for preservation (re-preservation), transportation and storage</p>	<p>5.1. Sufficiency of organizational and technical measures and requirements established by the ventilation system equipment developer to minimize the likelihood of mechanical and other damage to the ventilation system equipment during loading and unloading operations, transportation, storage and installation of ventilation system equipment.</p>
<p>6. Instructions for installation, maintenance and repair</p>	<p>6.1. Sufficiency of detailing of preparatory work and ventilation system equipment installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts (when fastening to civil structures), etc. <p>.2. Reasonableness of the scope and frequency of equipment maintenance, including justification of standards for fault detection of wearing parts, assemblies, components.</p> <p>6.3. Availability and sufficiency of instructions on the possibility and methods of refurbishment or replacement conditions, on the documentation of the repairs carried out and the results of the control of repaired parts, assemblies, components of ventilation system equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>7. Operation manual (instruction)</p>	<p>7.1. Availability and sufficiency of instructions for preparing ventilation system equipment for operation, including readiness for startup and adjustment.</p> <p>7.2. Availability and justification of established conditions and limits for safe operation of ventilation system equipment.</p> <p>7.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring.</p> <p>7.4. Availability and acceptability of methods for monitoring the established resource characteristics of the ventilation system equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its</p>

Technical Documentation	List of Issues
	purpose, safety class and application conditions at the specific NPP.
7.6 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for lifting mechanisms	
1. Draft TR/TS/TA/SP, assembly drawings, specification	<p>1.1. Correct designation and execution of documents.</p> <p>1.2. Compliance of parameters and characteristics of the lifting mechanisms, given in the technical assignment, with the original technical requirements, the completeness of accounting for functional indicators (purpose indicators).</p> <p>1.3. Sufficiency of the accepted marking for identification of parts, assembly units of lifting mechanisms, their detachable and spare parts, as well as separable and welded joints (weld overlays) during the manufacturing, installation and operation of lifting mechanisms.</p> <p>1.4. Justification of classifying lifting mechanisms as components and systems important for NPP safety (safety class, classification designation, group of special crane, seismic category).</p> <p>1.5. Justification of the choice of basic and welding (surfacing) materials for the conditions of application of lifting mechanisms at NPPs, including justification of the choice of materials for anti-corrosion paint coatings, taking into account the assigned service life of lifting mechanisms, their resistance to radiation exposure, decontamination solutions.</p> <p>1.6. Sufficiency of design solutions to exclude and minimize possible effects of climatic factors, aggressive environments, damage to the metal of lifting mechanisms.</p> <p>1.7. Justification of technical requirements for separable joints (studs, washers, nuts, bolts, stud seats, lubricants), tightening torques, locking methods.</p> <p>1.8. Availability and sufficiency of equipping lifting mechanisms with interlocks, alarms, parameter recorders, current inlet systems, means (devices) for emergency evacuation of the crane operator in the event of loss of power/smoke/gas pollution of the crane installation site, load-handling devices and instruments.</p> <p>1.9. Availability and acceptability of requirements in the engineering documentation for the completeness of the lifting mechanisms being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p>
2. Calculation for seismic resistance of special cranes	<p>2.1. Applicability of calculation programs when performing calculations for seismic resistance of special cranes for cases of simultaneous seismic impact on three spatial coordinates.</p> <p>2.2. Completeness of accounting for influencing factors when performing calculations.</p> <p>2.3. Compliance with stability conditions based on the results of seismic resistance calculation.</p> <p>2.4. Justification of the established resource characteristics and the assigned service life of the lifting mechanism.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Tables of quality control of welded	3.1. Correspondence of materials from which welded components of metal structures of special cranes and load-handling devices are made.

Technical Documentation	List of Issues
joints (weld overlays) and base metal	<p>3.2. Availability and sufficiency of documents to confirm properties of the metal in the manufacture of lifting mechanisms.</p> <p>3.3. Availability and sufficiency of additional requirements for welding, control of metal and welded joints in the manufacture of cranes and during their operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
6. Program for acceptance and delivery and acceptance tests	<p>4.1. Sufficiency of the scope of tests established in the acceptance test program and in the delivery and acceptance test program to confirm the required characteristics, parameters and properties of lifting mechanisms.</p> <p>4.2. Acceptability of simulation of operating conditions when testing lifting mechanisms. Static and dynamic tests of a special crane.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
5. Transportation and storage manual	<p>5.1. Sufficiency of organizational and technical measures and requirements established by the equipment developer to minimize the likelihood of mechanical and other damage to the lifting mechanisms during loading and unloading operations, transportation, storage and installation of lifting mechanisms.</p>
6. Instructions for installation, maintenance and repair	<p>6.1. Sufficiency of detailing of preparatory work and lifting mechanisms installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly. <p>6.2. Justification of the scope and frequency of lifting mechanisms maintenance, including justification of standards for fault detection of wearing parts.</p> <p>6.3. Availability and sufficiency of instructions on the possibility and methods of repairs, instructions on documenting the repairs carried out and the results of monitoring repaired lifting mechanisms.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7. Operation manual (instruction)	<p>7.1. Availability and sufficiency of instructions for preparing lifting mechanisms for commissioning, including:</p> <ul style="list-style-type: none"> - frequency and list of works on maintenance and repair of assemblies, mechanisms and safety devices; - possible damage to metal structures and methods of their repair; - methods of checking safety devices; - methods of brake adjusting; - a list of wearing parts and their wear tolerances; - procedure for conducting a technical examination; - procedure for testing the crane and its components with special loading

Technical Documentation	List of Issues
	<p>devices;</p> <ul style="list-style-type: none"> - instructions for bringing the crane to a safe position when not in operation; - safety requirements in emergency situations (including in the event of a power failure of the crane or failure of its systems in the presence of a load on the hook); - norms for rejection of ropes; - criteria of the limiting state of crane assemblies and mechanisms; - criteria of the limiting state of the crane for releasing it for overhaul; - specified service life of the crane; - adjusting characteristics of drives and permissible values of load sagging during start-up; - instructions for maintenance and operation of the crane, taking into account the specifics of its design; - a list of irregularities (developed by the organization – the crane manufacturer and the operating organization) in the NPP operation, after which it is necessary to monitor the crane's functional capability; - methods of monitoring the crane's functional capability (including the composition and scope of checks after occurrence of violations in the NPP operation); - procedure and methodology for the crane decontamination after occurrence of irregularities in the NPP operation that have radiation consequences. <p>7.2. Availability and acceptability of methods for monitoring the established resource characteristics of lifting mechanisms during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7.7 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for cable products	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Completeness of accounting for functional indicators (indicators of designation). Availability of characteristics required at the place of operation of cable products (requirements for functionality and reliability at the workplace, for environmental conditions and operating conditions, connections, acceptance/delivery and acceptance and periodic tests, support service, data security and service life).</p> <p>1.3. Justification of classifying cable products as components and systems important for NPP safety (safety class, classification designation, equipment group, seismic category).</p> <p>1.4. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of cable products and its limiting values; - of fire safety; - of electric safety; - of radiation safety; - for structure; - for seismic resistance;

Technical Documentation	List of Issues
	<ul style="list-style-type: none"> - of resistance to EFA, including in accident conditions; - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for electromagnetic compatibility; - for product unification; - for environmental protection. <p>1.5. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>1.6. Availability and sufficiency of methods for monitoring the compliance of cable products to the established requirements.</p> <p>1.7. Compliance of forms of reporting documents on compliance assessment in the form of tests.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. General view drawing, specification	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Justification and sufficiency of design solutions to meet the requirements established in the technical specifications of requirements.</p> <p>2.3. Justification and sufficiency of established requirements for compliance assessment in the form of tests and acceptance.</p> <p>2.4. Justification and sufficiency of specified methods for monitoring the compliance of cable products to the established requirements.</p> <p>2.5. Availability of imported component materials and products.</p> <p>2.6. Availability and acceptability of requirements in the engineering documentation for the completeness of the cable products being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer</p>
3. Program for acceptance and delivery and acceptance tests	<p>3.1. Sufficiency of the scope of tests established in the acceptance test program and in the delivery and acceptance test program to confirm the required characteristics, parameters and properties of cable products.</p> <p>3.2. Acceptability of simulation of operating conditions when testing cable products.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
4. Instructions for preservation (re-preservation), transportation and storage	<p>4.1. Sufficiency of organizational and technical measures and requirements established by the cable products developer to minimize the likelihood of mechanical and other damage to the cable products during loading and unloading operations, transportation, storage and installation of cable products.</p>
5. Instructions for installation, maintenance and repair	<p>5.1. Sufficiency of detailing of preparatory work and operations for installation of cable products, including the requirements necessary for installation, adjustment, start-up, regulation and commissioning of cable products at the place of their application.</p> <p>5.2. Justification of the scope and frequency of maintenance of cable products.</p>

Technical Documentation	List of Issues
	5.3. Availability and sufficiency of instructions on the possibility and methods of repairs, instructions on documenting the repairs carried out and the results of monitoring repaired cable products.
6. Operation manual (instruction)	<p>6.1. Availability and sufficiency of information on cable product design, operating principle, characteristics (properties), its component parts and instructions, required for correct and safe operation of the cable product (use as intended, maintenance, routine maintenance, storage and transportation) and assessments of its technical condition when defining the requirement of sending it for repairs, and information on disposal of cable product and its constituent parts.</p> <p>6.2. Availability and acceptability of methods for monitoring the established resource characteristics of the cable product during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7. Service list	7.1. Availability and completeness of information, certifying manufacturer's warranty, values of the basic product parameters and characteristics, information, reflecting the technical condition of this product, information on product certification and disposal, and information, which is input during its operation (duration and conditions of operation, maintenance, repair and other data).
8. Data sheet	8.1. Availability and completeness of information certifying the manufacturer's warranty, the values of the main parameters and characteristics (properties) of the product, as well as information on certification and disposal of product.
7.8 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for pumping equipment	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Completeness of accounting for functional indicators (indicators of designation).</p> <p>1.3. Completeness of accounting for functional indicators (purpose indicators), including the modes of changing parameters of medium, the coefficient of resistance, the amount of leaks.</p> <p>1.4. Physical and mechanical characteristics of materials for sealing products used in pumping equipment.</p> <p>1.5. Quality and properties of semifinished products with an indication of their material.</p> <p>1.6. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of pumping equipment and its limiting values; - of fire safety; - of electric safety; - of degree of protection of enclosures (IP code); - of radiation safety; - for structure; - for seismic resistance;

Technical Documentation	List of Issues
	<ul style="list-style-type: none"> - of resistance to EFA, including in accident conditions; - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for electromagnetic compatibility; - for product unification; - for environmental protection. <p>1.7. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>1.8. Availability and sufficiency of methods for monitoring the compliance of pumping equipment to the established requirements.</p> <p>1.9. Compliance of forms of reporting documents on compliance assessment in the form of tests.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. Assembly drawings, specification, drawings of wearing and body parts, data sheet	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Overall dimensions (including mounting dimensions), sketches of bevelling, connecting dimensions, weld type, attachment points to civil structures.</p> <p>2.3. Justification of classifying pumping equipment as components and systems important for NPP safety (safety class, classification designation, seismic category and seismic stability category).</p> <p>2.4. Justification of choice of semifinished products, basic and welding (surfacing) materials for the conditions of application of pumping equipment at NPPs, including justification of choice of materials that meet the requirements for protection against erosive wear, anti-corrosion coatings, taking into account the assigned service life of pumping equipment, its resistance to radiation and temperature embrittlement, decontamination solutions.</p> <p>2.5. Justification of technical requirements for separable joints (studs, washers, nuts, bolts, gaskets, sealing surfaces, stud seats, lubricants), tightening torques, locking methods.</p> <p>2.6. Availability and acceptability of requirements in the engineering documentation for the completeness of pumping equipment being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>2.7. Justification of need (or lack thereof) in the built-in tools and/or the possibility of connecting external means of technical diagnostics.</p> <p>2.8. Sufficiency of the accepted markings, safety class, product designation, steel grade and melt number (for casings made of castings).</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Strength calculations	<p>3.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>3.2. Completeness of accounting for influencing factors when performing</p>

Technical Documentation	List of Issues
	<p>calculations, taking into account the loads transmitted from the pipelines.</p> <p>3.3. Compliance with the conditions of strength and stability based on the results of strength calculations and seismic resistance calculations.</p> <p>3.4. Justification of the established resource characteristics and the assigned service life of pumping equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
4. Tables of quality control of welded joints (weld overlays) and base metal	<p>4.1. Compliance of the established methods of destructive and non-destructive tests of pumping equipment metal and compliance of the scope of tests using these methods to the requirements of federal rules and norms.</p> <p>4.2. Availability and sufficiency of control samples to confirm the properties of metal during the manufacturing of pumping equipment</p>
5. Program of acceptance, type, qualification, comparative, periodic and delivery and acceptance tests	<p>5.1. Sufficiency of the scope of tests established in the program of acceptance, type, comparative, qualification, periodic and delivery and acceptance tests to confirm the required characteristics, parameters and properties of the equipment.</p> <p>5.2. Acceptability of simulation of operating conditions when testing pumping equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
6. Instructions for preservation (re-preservation), transportation and storage	<p>6.1. Sufficiency of organizational and technical measures and requirements established by the pumping equipment developer to minimize the likelihood of mechanical and other damage to pumping equipment during loading and unloading operations, transportation, storage and installation of pumping equipment</p>
7. Instructions for installation, maintenance and repair	<p>7.1. Sufficiency of detailing of preparatory work and pumping equipment installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts (when fastening to civil structures), etc. <p>7.2. Reasonableness of the scope and frequency of equipment maintenance, including justification of standards for fault detection of wearing parts, assemblies, components.</p> <p>7.3. Availability and sufficiency of instructions on the possibility and methods of refurbishment or replacement conditions, on the documentation of the repairs carried out and the results of the control of repaired parts, assemblies, components of pumping equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
8. Operation manual	8.1. Availability and sufficiency of instructions for preparing pumping

Technical Documentation	List of Issues
(instruction)	<p>equipment for operation, including readiness for startup and adjustment.</p> <p>8.2. Availability and justification of established conditions and limits for safe operation of pumping equipment.</p> <p>8.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring.</p> <p>8.4. Availability and acceptability of methods for monitoring the established resource characteristics of pumping equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7.9 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for heat-exchange equipment	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Completeness of accounting for functional indicators (indicators of designation).</p> <p>1.3. Completeness of accounting for functional indicators (purpose indicators), including the modes of changing parameters of medium, the coefficient of resistance, the amount of leaks.</p> <p>1.4. Physical and mechanical characteristics of materials for sealing products used in heat-exchange equipment.</p> <p>1.5. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of heat-exchange equipment and its limiting values; - of fire safety; - of degree of protection of enclosures (IP code); - of radiation safety; - for structure; - for seismic resistance; - of resistance to EFA, including in accident conditions; - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for resistance to aggressive corrosive atmospheric agents; - for quality assurance; - for product unification; - for environmental protection. <p>1.6. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>1.7. Availability and sufficiency of methods for monitoring the compliance of heat-exchange equipment to the established requirements.</p> <p>1.8. Compliance of forms of reporting documents on compliance assessment in the form of tests.</p>
2. Assembly drawings, specification, data sheet	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Overall dimensions (including mounting dimensions), sketches of bevelling, connecting dimensions, weld type, attachment points to civil structures.</p> <p>2.3. Justification of classifying heat-exchange equipment as components and</p>

Technical Documentation	List of Issues
	<p>systems important for NPP safety (safety class, classification designation, seismic category and seismic stability category).</p> <p>2.4. Justification of choice of semifinished products, basic and welding (surfacing) materials for the conditions of application of heat-exchange equipment at NPPs, including justification of choice of materials that meet the requirements for protection against erosive wear, anti-corrosion coatings, taking into account the assigned service life of heat-exchange equipment, its resistance to decontamination solutions.</p> <p>2.5. Justification of technical requirements for separable joints (studs, washers, nuts, bolts, gaskets, sealing surfaces, stud seats, lubricants), tightening torques, locking methods.</p> <p>2.6. Availability and acceptability of requirements in the engineering documentation for the completeness of heat-exchange equipment being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>2.7. Sufficiency of the accepted markings, safety class and product designation, steel grade and melt number (for casings made of castings).</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Strength calculations	<p>3.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>3.2. Completeness of accounting for influencing factors when performing calculations, taking into account the loads transmitted from the pipelines.</p> <p>3.3. Compliance with the conditions of strength and stability based on the results of strength calculations and seismic resistance calculations.</p> <p>3.4. Justification of the established resource characteristics and the assigned service life of heat-exchange equipment</p>
4. Tables of quality control of welded joints (weld overlays) and base metal	<p>4.1. Compliance of the established methods of destructive and non-destructive tests of pumping equipment metal and compliance of the scope of tests using these methods to the requirements of federal rules and norms.</p> <p>4.2. Availability and sufficiency of control samples to confirm the properties of metal during the manufacturing of heat-exchange equipment</p>
5. Program of acceptance, type, qualification, periodic and delivery and acceptance tests	<p>5.1. Sufficiency of the scope of tests established in the program of acceptance, type, qualification, periodic and delivery and acceptance tests to confirm the required characteristics, parameters and properties of the equipment.</p> <p>5.2. Acceptability of simulation of operating conditions when testing heat-exchange equipment</p>
6. Instructions for preservation (re-preservation), transportation and storage	<p>6.1. Sufficiency of organizational and technical measures and requirements established by the heat-exchange equipment developer to minimize the likelihood of mechanical and other damage to heat-exchange equipment during loading and unloading operations, transportation, storage and installation of heat-exchange equipment</p>
7. Instructions for installation, maintenance and repair	<p>7.1. Sufficiency of detailing of preparatory work and heat-exchange equipment installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials;

Technical Documentation	List of Issues
	<ul style="list-style-type: none"> - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts (when fastening to civil structures), etc. <p>7.2. Reasonableness of the scope and frequency of equipment maintenance, including justification of standards for fault detection of wearing parts, assemblies, components.</p> <p>7.3. Availability and sufficiency of instructions on the possibility and methods of refurbishment or replacement conditions, on the documentation of the repairs carried out and the results of the control of repaired parts, assemblies, components of heat-exchange equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
8. Operation manual (instruction)	<p>8.1. Availability and sufficiency of instructions for preparing heat-exchange equipment for operation, including readiness for startup and adjustment.</p> <p>8.2. Availability and justification of established conditions and limits for safe operation of heat-exchange equipment.</p> <p>8.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring.</p> <p>8.4. Availability and acceptability of methods for monitoring the established resource characteristics of heat-exchange equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7.10 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for lifting mechanisms	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Completeness of accounting for functional indicators (purpose indicators), including the modes of changing parameters of medium, the coefficient of resistance, the amount of leaks.</p> <p>1.3. Physical and mechanical characteristics of materials for sealing products used in pipeline valves</p>
2. Assembly drawings, specification, data sheet	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Overall dimensions (including mounting dimensions), sketches of bevelling, connecting dimensions, weld type, attachment points to civil structures. Required closing (opening) time of the valve.</p> <p>2.3. Justification of classifying equipment as components and systems important for NPP safety (safety class, classification designation, valve group, seismic category and seismic stability category).</p> <p>2.4. Justification of choice of semifinished products, basic and welding (surfacing) materials for the conditions of application of pipeline valves at NPPs, including justification of choice of materials that meet the requirements for protection against erosive wear, anti-corrosion coatings, taking into account the assigned service life of pipeline valves, its resistance to radiation and temperature embrittlement, resistance to exposure to boric acid solutions, decontamination solutions, water chemistry of coolant.</p>

Technical Documentation	List of Issues
	<p>2.5. Justification of technical requirements for separable joints (studs, washers, nuts, bolts, gaskets, sealing surfaces, stud seats, lubricants), tightening torques, locking methods.</p> <p>2.6. Sufficiency of design solutions to ensure a cavitation-free operation.</p> <p>2.7. Availability and acceptability of requirements in the engineering documentation for the completeness of pipeline valves being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>2.8. Justification of need (or lack thereof) in the built-in tools and/or the possibility of connecting external means of technical diagnostics.</p> <p>2.9. Sufficiency of the accepted markings, safety class and valve group, product designation, steel grade and melt number (for casings made of castings).</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Strength calculations	<p>3.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>3.2. Completeness of accounting for influencing factors when performing calculations, taking into account the loads transmitted from the pipelines.</p> <p>3.3. Compliance with the conditions of strength and stability based on the results of strength calculations and seismic resistance calculations.</p> <p>3.4. Justification of the established resource characteristics and the assigned service life of pipeline valves.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
4. Tables of quality control of welded joints (weld overlays) and base metal	<p>4.1. Compliance of the established methods of destructive and non-destructive tests of pipeline valves metal and compliance of the scope of tests using these methods to the requirements of federal rules and norms.</p> <p>4.2. Availability and sufficiency of control samples to confirm the properties of metal during the manufacturing of pipeline valves</p>
5. Program of acceptance, type, qualification, periodic and delivery and acceptance tests	<p>5.1. Sufficiency of the scope of tests established in the program of acceptance, type, qualification, periodic and delivery and acceptance tests to confirm the required characteristics, parameters and properties of the equipment.</p> <p>5.2. Acceptability of simulation of operating conditions when testing pipeline valves.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
6. Instructions for preservation (re-preservation), transportation and storage	<p>6.1. Sufficiency of organizational and technical measures and requirements established by the pipeline valves developer to minimize the likelihood of mechanical and other damage to the pipeline valves during loading and unloading operations, transportation, storage and installation of pipeline valves</p>

Technical Documentation	List of Issues
7. Instructions for installation, maintenance and repair	<p>7.1. Sufficiency of detailing of preparatory work and pipeline valves installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts (when fastening to civil structures), etc. <p>7.2. Reasonableness of the scope and frequency of equipment maintenance, including justification of standards for fault detection of wearing parts, assemblies, components.</p> <p>7.3. Availability and sufficiency of instructions on the possibility and methods of refurbishment or replacement conditions, on the documentation of the repairs carried out and the results of the control of repaired parts, assemblies, components of pipeline valves.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
8. Operation manual (instruction)	<p>8.1. Availability and sufficiency of instructions for preparing pipeline valves for operation, including readiness for startup and adjustment.</p> <p>8.2. Availability and justification of established conditions and limits for safe operation of pipeline valves.</p> <p>8.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring.</p> <p>8.4. Availability and acceptability of methods for monitoring the established resource characteristics of pipeline valves during their operation</p>
7.11 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for heat-exchange equipment	
1. Draft of TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Completeness of accounting for functional indicators (indicators of designation).</p> <p>1.3. Availability of characteristics required at the place of operation of equipment (requirements for functionality, efficiency and reliability at the workplace, requirements for environmental conditions and operating conditions, connections, acceptance/delivery and acceptance and periodic tests, support service and service life).</p> <p>1.4. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of equipment and its limiting values; - of fire safety; - of electric safety; - of degree of protection of enclosures (IP code); - of radiation safety; - for structure; - for seismic resistance; - of resistance to EFA, including in accident conditions;

Technical Documentation	List of Issues
	<ul style="list-style-type: none"> - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for resistance to aggressive corrosive atmospheric agents; - for electromagnetic compatibility; - for product unification; - for environmental protection. <p>1.5. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>1.6. Availability and sufficiency of methods for monitoring the compliance of electrical equipment to the established requirements.</p> <p>1.7. Compliance of forms of reporting documents on compliance assessment in the form of tests.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>2. Electrical circuits:</p> <ul style="list-style-type: none"> - structural; - functional; - elementary (complete); - connections (assembly) circuits; - connecting circuits; - general; - arrangement; - unified. 	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Compliance of circuits with electrical requirements of the Unified System of Design Documentation.</p> <p>2.3. Availability of information in scope sufficient for the design, manufacture, operation and repair of the product (plant).</p> <p>2.4. Availability of an unambiguous connection, which provides the ability to quickly find the same components (devices, functional groups), connections or joints on all circuits of a given set.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
<p>3. General view drawings, assembly drawings, specification</p>	<p>3.1. Correct designation and execution of documents.</p> <p>3.2. Justification and sufficiency of design solutions to meet the requirements established in the technical specifications of requirements.</p> <p>3.3. Justification and sufficiency of established requirements for compliance assessment in the form of tests and acceptance.</p> <p>3.4. Justification and sufficiency of specified methods for monitoring the compliance of electrical equipment to the established requirements.</p> <p>3.5. Availability of imported component parts.</p> <p>3.6. Availability and acceptability of requirements in the engineering documentation for the completeness of the electrical equipment, for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>3.7. Availability and sufficiency of electrical equipment with safety devices, indicating and signalling and recording devices, temperature and tightness control sensors.</p> <p>3.8. Availability and sufficiency of electrical equipment with means against unauthorized access.</p> <p>3.9. Availability and sufficiency of electrical equipment with means maintaining a given thermal mode.</p> <p>3.10. Availability and sufficiency of electrical equipment with diagnostic</p>

Technical Documentation	List of Issues
	<p>tools.</p> <p>3.11. Availability and acceptability of requirements in the engineering documentation for the completeness of electrical equipment being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
6. Program for acceptance and delivery and acceptance tests	<p>4.1. Sufficiency of the scope of tests established in the acceptance test program and in the delivery and acceptance test program to confirm the required characteristics, parameters and properties of electrical equipment.</p> <p>4.2. Acceptability of simulation of operating conditions when testing electrical equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
5. Instructions for preservation (re-preservation), transportation and storage	<p>5.1. Sufficiency of organizational and technical measures and requirements established by the electrical equipment developer to minimize the likelihood of mechanical and other damage to the equipment during loading and unloading operations, transportation, storage and installation of equipment</p>
6. Instructions for installation, maintenance and repair	<p>6.1. Sufficiency of detailing of preparatory work and installation of electrical equipment, including the requirements required for installation, commissioning, start-up, regulation, test run and commissioning of electrical equipment and its constituent parts into operation at the site of its application.</p> <p>6.2. Justification of the scope and frequency of maintenance of electrical equipment.</p> <p>6.3. Availability and sufficiency of instructions on the possibility and methods of repairs, instructions on documenting the repairs carried out and the results of monitoring repaired electrical equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7. Operation manual (instruction)	<p>7.1. Availability and sufficiency of information on the product design, operating principle, characteristics (properties), its component parts and instructions, required for correct and safe operation of the product (use as intended, maintenance, routine maintenance, storage and transportation) and assessments of its technical condition when defining the requirement of sending it for repairs, and information on disposal of the product and its constituent parts.</p> <p>7.2. Availability and acceptability of methods for monitoring the established resource characteristics of electrical equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>

Technical Documentation	List of Issues
8. Service list	8.1. Availability and completeness of information, certifying manufacturer's warranty, values of the basic product parameters and characteristics, information, reflecting the technical condition of this product, information on product certification and disposal, and information, which is input during its operation (duration and conditions of operation, maintenance, repair and other data).
9. Data sheet	9.1. Availability and completeness of information certifying the manufacturer's warranty, the values of the main parameters and characteristics (properties) of the product, as well as information on certification and disposal of this product.
7.12 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for lifting mechanisms	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Compliance of parameters and characteristics of equipment, ALS pipelines, sealed passages, prestressing system of containment, given in the technical assignment, to the original specifications; completeness of accounting for functional indicators (purpose indicators).</p> <p>1.3. Physical and mechanical characteristics of materials for sealing products used in the ALS equipment, welding materials and materials for sealing steel liner.</p> <p>1.4. Completeness of accounting for functional indicators (indicators of designation).</p> <p>1.5. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of ALS equipment and its limiting values; - of fire safety; - of electric safety; - of degree of protection of enclosures (IP code); - of radiation safety; - for structure; - for seismic resistance; - of resistance to EFA, including in accident conditions; - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for product unification; - for environmental protection. <p>1.6. Availability and sufficiency of requirements for arrangement of hermetic enclosure, including requirements for sealing steel liner, embedded parts, manholes, doors, air locks and their embedded parts, penetrations, isolating devices, bypass and safety devices, sealing components and hermetic valves.</p> <p>1.7. Availability and sufficiency of requirements for a passive steam condensation system, a passive sprinkler device system and an active sprinkler system, including water collectors, ventilation and cooling systems, hydrogen explosion systems, systems of emergency gas-aerosol cleaning installations.</p> <p>1.8. Availability and sufficiency of requirements for welding and monitoring</p>

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	<p>of components of localizing safety systems.</p> <p>1.9. Availability and sufficiency of requirements for strength and tightness tests of hermetic enclosure, tightness tests of hermetic enclosure components, and hydraulic tests for tightness of rooms, water collectors and tanks.</p> <p>1.10. Availability and sufficiency of requirements for functional testing of ALS equipment.</p> <p>1.11. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. Assembly drawings, specification, data sheet	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Overall dimensions (including mounting dimensions), sketches of bevelling, connecting dimensions, attachment points to civil structures.</p> <p>2.3. Justification of classifying ALS equipment as components and systems important for NPP safety (safety class, classification designation, seismic category and seismic stability category).</p> <p>2.4. Justification of choice of semifinished products, basic and welding (surfacing) materials for the conditions of application of ALS equipment at NPPs, including justification of choice of materials that meet the requirements for protection against erosive wear, anti-corrosion coatings.</p> <p>2.5. Justification of technical requirements for separable joints (studs, washers, nuts, bolts, gaskets, sealing surfaces, stud seats, lubricants), tightening torques, locking methods.</p> <p>2.6. Availability and acceptability of requirements in the engineering documentation for the completeness of the ALS equipment being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>2.7. Sufficiency of the accepted markings, safety class and product designation, steel grade and melt number (for casings made of castings).</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Strength calculations	<p>3.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>3.2. Completeness of accounting for influencing factors when performing calculations.</p> <p>3.3. Compliance with the conditions of strength and stability based on the results of strength calculations and seismic resistance calculations.</p> <p>3.4. Justification of the established resource characteristics and the assigned service life of the ALS equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
4. Program of	4.1. Sufficiency of the scope of tests established in the program of

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acceptance, type, qualification, periodic and delivery and acceptance tests	<p>acceptance, type, qualification, periodic and delivery and acceptance tests to confirm the required characteristics, parameters and properties of the ALS equipment.</p> <p>4.2. Acceptability of simulation of operating conditions when testing ALS equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
5. Instructions for preservation (re-preservation), transportation and storage	<p>5.1. Sufficiency of organizational and technical measures and requirements established by the ALS equipment developer to minimize the likelihood of mechanical and other damage to the ALS equipment during loading and unloading operations, transportation, storage and installation of ALS equipment.</p>
6. Instructions for installation, maintenance and repair	<p>6.1. Sufficiency of detailing of preparatory work and ALS equipment installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts (when fastening to civil structures), etc. <p>6.2. Reasonableness of the scope and frequency of ALS equipment maintenance, including justification of standards for fault detection of wearing parts, assemblies, components.</p> <p>6.3. Availability and sufficiency of instructions on the possibility and methods of refurbishment or replacement conditions, on the documentation of the repairs carried out and the results of the control of repaired parts, assemblies, components of ALS equipment.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7. Operation manual (instruction)	<p>7.1. Availability and sufficiency of instructions for preparing ALS equipment for operation, including readiness for startup and adjustment.</p> <p>7.2. Availability and justification of established conditions and limits for safe operation of ALS equipment.</p> <p>7.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring.</p> <p>7.4. Availability and acceptability of methods for monitoring the established resource characteristics of the ALS equipment during its operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7.13 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for equipment and DGS systems (inter-unit and security systems) of NPPs	
1. Draft	1.1. Correct designation and execution of a document.

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TR/TS/TA/SP	<p>1.2. Compliance of parameters and characteristics of DGS equipment and systems given in the technical assignment, with the original specifications; completeness of accounting for functional indicators (purpose indicators), including the modes of changing the medium parameters.</p> <p>1.3. Physical and mechanical characteristics of materials for sealing products used in DGS equipment and systems.</p> <p>1.4. Completeness of accounting for functional indicators (indicators of designation).</p> <p>1.5. Consideration of requirements:</p> <ul style="list-style-type: none"> - for the impact on the safety of NPPs (safety class); - of federal norms and rules and standardization documents that establish requirements for the characteristics and parameters of DGS equipment and systems and its limiting values; - of fire safety; - of electric safety; - of degree of protection of enclosures (IP code); - of radiation safety; - for structure; - for seismic resistance; - of resistance to EFA, including in accident conditions; - for reliability; - for resistance to the effects of decontamination solutions; - for radiation resistance; - for oil resistance; - for resistance to corrosive agents of atmosphere and media in pipelines (oil, diesel fuel); - for electromagnetic compatibility; - for product unification; - for environmental protection. <p>1.6. Availability and sufficiency of requirements for a diesel engine and its systems, a generator and its systems, DGS automation, measuring instruments, fuel and oil supply, cleaning system components (filters).</p> <p>1.7. Availability and sufficiency of requirements for compliance assessment in the form of tests and acceptance.</p> <p>1.8. Compliance of forms of reporting documents on compliance assessment in the form of tests.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. Assembly drawings, specification, data sheet	<p>2.1. Correct designation and execution of documents.</p> <p>2.2. Overall dimensions (including mounting dimensions), connecting dimensions, attachment points to civil structures.</p> <p>2.3. Justification of classifying DGS equipment and systems as components and systems important for NPP safety (safety class, classification designation, seismic category and seismic stability category).</p> <p>2.4. Justification of choice of semifinished products, basic and welding (surfacing) materials for the conditions of application of DGS equipment and systems at NPPs</p> <p>2.5. Justification of technical requirements for filters, separable joints (studs,</p>

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	<p>washers, nuts, bolts, gaskets, sealing surfaces, stud seats, lubricants), tightening torques, locking methods.</p> <p>2.6. Availability and acceptability of requirements in the engineering documentation for the completeness of the DGS equipment and systems being tested, and for the completeness of the delivery, including the set of documentation transferred to the customer.</p> <p>2.7. Justification of need (or lack thereof) in the built-in tools and/or the possibility of connecting external means of technical diagnostics.</p> <p>2.8. Sufficiency of the accepted marking, safety class and designation of DGS equipment and systems.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
3. Strength calculations	<p>3.1. Applicability of design programs when performing strength calculations and assumptions made in the calculations.</p> <p>3.2. Completeness of accounting for influencing factors when performing calculations.</p> <p>3.3. Compliance with the conditions of strength and stability based on the results of strength calculations and seismic resistance calculations.</p> <p>3.4. Justification of established resource characteristics and assigned service life of DGS equipment and systems, including electrical equipment, instrumentation</p>
4. Program of acceptance, type, qualification, periodic and delivery and acceptance tests	<p>4.1. Sufficiency of the scope of tests established in the program of acceptance, type, qualification, periodic and delivery and acceptance tests to confirm the required characteristics, parameters and properties of the DGS equipment and systems.</p> <p>4.2. Acceptability of simulation of operating conditions when testing DGS equipment and systems.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
5. Instructions for preservation (re-preservation), transportation and storage	<p>5.1. Sufficiency of organizational and technical measures and requirements established by the DGS equipment and systems developer to minimize the likelihood of mechanical and other damage to the DGS equipment and systems during loading and unloading operations, transportation, storage and installation of DGS equipment and systems.</p>
6. Instructions for installation, maintenance and repair	<p>6.1. Sufficiency of detailing of preparatory work and DGS equipment and systems installation operations, including the requirements to:</p> <ul style="list-style-type: none"> - cleanliness of rooms; - technological accessories, fixtures, tools and auxiliary materials; - personnel performing installation; - sequence of operations for installation and assembly for welding; - registration of statements of hidden work on the installation of embedded parts (when fastening to civil structures), etc. <p>6.2. Reasonableness of the scope and frequency of DGS equipment and system maintenance, including justification of standards for fault detection of wearing parts, assemblies, components.</p>

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	<p>6.3. Availability and sufficiency of instructions on the possibility and methods of refurbishment or replacement conditions, on the documentation of the repairs carried out and the results of the control of repaired parts, assemblies, components of DGS equipment and systems</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7. Operation manual (instruction)	<p>7.1. Availability and sufficiency of instructions for preparing DGS equipment and systems for operation, including readiness for startup and adjustment.</p> <p>7.2. Availability and justification of established conditions and limits for safe operation of DGS equipment and systems.</p> <p>7.3. Availability and sufficiency of the established methods, means and frequency of operational monitoring.</p> <p>7.4. Availability and acceptability of methods for monitoring the established resource characteristics of the DGS equipment and systems during their operation.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7.14 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for electronic elements (including electrical radio products)	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document.</p> <p>1.2. Availability of necessary approvals.</p> <p>1.3. Availability and sufficiency of documents included in the list of Russian norms, rules and other applicable regulatory documents, the requirements of which shall be met by the electronic elements intended for purchase.</p> <p>1.4. Sufficiency of established indicators of purpose, characterizing the essence of electronic elements and their functional properties, establishing the ability of a product to perform its functions under certain conditions of its rational use for its intended purpose.</p> <p>1.5. Completeness of delivery, including spare parts and tools.</p> <p>1.6. Reliability indicators.</p> <p>Justification of establishing indicators of the products reliability, which are manifested in the preservation of products quality during operation and storage.</p> <p>Availability of requirements for the main indicators of products reliability.</p> <p>Reliability of products:</p> <ul style="list-style-type: none"> - trouble-free operation probability; - failure probability; - average time to failure; - mean time between failures; - failure rate. <p>Repairability of products:</p> <ul style="list-style-type: none"> - likelihood of recovery; - assessed failure rates; - mean down time; - average restoration time;

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	<ul style="list-style-type: none"> - intensity of recovery. <p>Reliability and repairability:</p> <ul style="list-style-type: none"> - availability factor; - downtime ratio; - maintenance ratio; <p>Durability:</p> <ul style="list-style-type: none"> - gamma-percentile life; - average service life; - average gross life; - average service life; - average service life before write-off; - average time between overhaul; - average overhaul life. <p>Storageability:</p> <ul style="list-style-type: none"> - average storageability time; - failures rate during storage; - assessed failure rates during storage. <p>1.7. Compliance of established requirements for ensuring monitoring during development, manufacturing, testing, acceptance and operation of products with the requirements of Russian norms, rules and other applicable regulatory documents, the requirements of which shall apply to the product.</p> <p>18. Metrological support during manufacture.</p> <p>Checking the results of analysis and evaluation of engineering solutions for selection of parameters to be measured, for establishment of requirements for accuracy of measurements and provision of methods and instruments of measurement (MI) of the processes of development, manufacturing, testing, operation and repair of products.</p> <p>Participation of metrology specialists in the development of technical documentation and their identification of erroneous or insufficiently substantiated decisions on metrological support, and assistance to the developer in finding the most rational solutions.</p> <p>Check the performance of:</p> <ul style="list-style-type: none"> - assessment of rationality of the range of measured parameters; - assessment of optimality of requirements for measurement accuracy; - assessment of compliance of measurement accuracy with the specified requirements; - assessment of completeness and correctness of the requirements for MI accuracy; - assessment of the design testability (the ability to control necessary parameters of the manufacturing, testing, operation and repair); - assessment of possibility of efficient servicing of selected MIs; - assessment of rationality of selected means and measurement techniques; - results of analysis of the use of computer technology in measuring operations; - results of control of metrological terms, names of measured quantities and designations of their units. <p>1.9. Adequacy of measures taken to ensure the quality of products during transportation:</p> <ol style="list-style-type: none"> 1) selection of the appropriate type of vehicle; 2) method and conditions of loading and unloading operations;

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	<p>3) method of stowage in a vehicle; 4) transportation conditions; 5) duration of transportation. Storage requirements for electronic elements. Quality assurance of electronic elements. 1.10. Checking the completeness of the established set of product documentation (data sheet, quality certificate, test programme and procedure, technical description, and instructions for installation, commissioning and operation) and determining its sufficiency for assessing product quality. 1.11. Verification of compliance with the established requirements for seismic resistance, strength calculations, electromagnetic compatibility, corrosion resistance, fire safety, explosion safety, and other requirements of Russian norms, rules and other applicable regulatory documents, the requirements of which shall be met by electronic elements intended for purchase. 1.12. Verification of ensuring functional capability of products in accident conditions. 1.13. Checking the compliance of characteristics and parameters of electronic elements specified in the TR/TS/TA/SP, established in the manufacturer's TDS.</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
7.15 - List of documentation and issues to be considered during the review and analysis/expert review of the documentation for semifinished products and welding (surfacing) materials	
1. Draft TR/TS/TA/SP	<p>1.1. Correct designation and execution of a document. 1.2. Availability of coordination of technical requirements with a Russian leading materials science organization. 1.3. Availability and sufficiency of documents included in the list of Russian norms, rules and other applicable regulatory documents, the requirements of which shall be met by the equipment, products and components intended for purchase. 1.4. Checking the completeness of the requirements for physical and mechanical, process and corrosive properties of the base material and/or seam metal or weld metal. 1.5. Verification of completeness of the requirements for characteristics of materials established by the current norms for strength calculations of equipment, products and components where these materials are used. 1.6. Checking the provision of weldability conditions with Russian materials. 1.7. Checking the product resistance to decontamination (if necessary).</p> <p>Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.</p>
2. Programs of acceptance, delivery and acceptance, periodic tests	2.1. Sufficiency of the scope of tests established in the program of acceptance, delivery and acceptance, periodic tests to confirm the required characteristics, parameters and properties of imported semifinished products and welding (surfacing) materials.

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	Other issues for establishing compliance with mandatory requirements, taking into account the technical complexity and science intensity of the product, its purpose, safety class and application conditions at NPPs.

Revision Record Sheet

Rev.	Numbers of sheets (pages)				Total sheets (pages) in the document	Announcement number	Signature	Date
	revised	replaced	new	cancelled				
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